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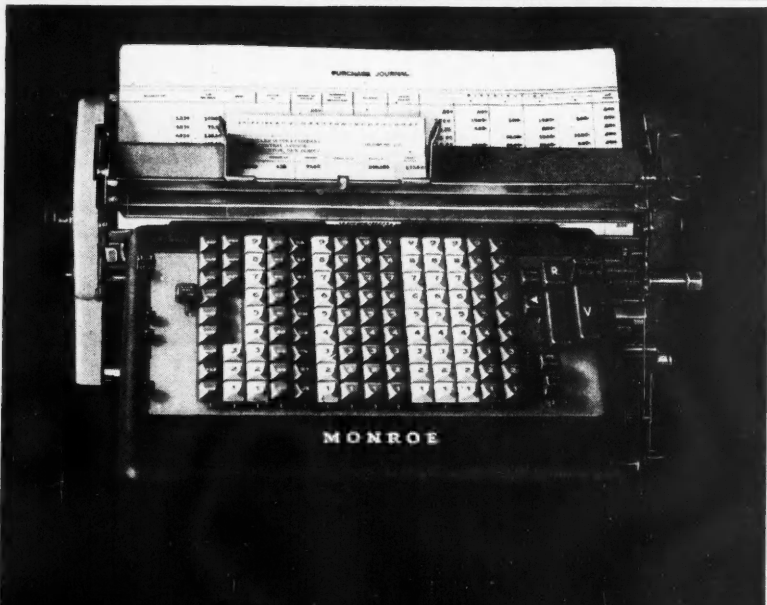
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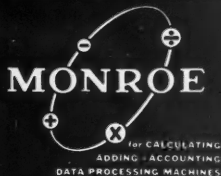


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THE CANADIAN CHARTERED ACCOUNTANT

VOL. 75, No. 4

OCTOBER 1959

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IN THIS ISSUE

R. F. HOGAN (page 305)

The article "A Program for Product Profitability" is a forward-looking analysis on what can be achieved by executive management in those industries subject to intense competition and who need to appraise the profitability of each completed product they sell. The author's proposal for a program which will track down those areas of operation that are not competitive and where cost performance is weak should be of particular interest at the present time when cost consciousness is of such vital concern if our economy is to continue expanding.

Ronald F. Hogan, who is controller of Ford of Canada Limited, began his career with the company in 1934 after graduating in business administration at the University of Western Ontario. In the intervening 25 years he has served Ford in many accounting positions. In 1947 he was named assistant controller in charge of all manufacturing accounting. Then in 1955 he was appointed divisional controller for the Windsor Manufacturing Division. His recent appointment as controller of the entire company became effective in 1958.

L. E. BARLOW (page 312)

The calculation of earnings per share is one of a number of useful financial statistics of help to securities dealers and investors in measuring a company's performance. In "Earnings Ratios in Valuing Companies", Leonard E. Barlow discusses a subject of considerable importance to those who are concerned with

either purchasing control or outright ownership of a business. Measuring a company's profitability is accomplished by the use of two financial ratios, the price-earnings ratio and the ratio of net profits to net worth. Mr. Barlow presents a very comprehensive appraisal of both methods as they apply to public and privately-owned companies. There are, of course, other outside considerations such as tax liability which may weigh more importantly, he points out; but, subject to such limitations, the ratios are highly useful tools in considering the valuation of a business.

The author is a director of McLeod, Young, Weir & Co. Ltd., with whom he has been associated since 1937. Among his varied responsibilities is that of preparing new security issues for market. He is a member of the Security Analysts' Association of Toronto and the Toronto Board of Trade.

F. S. CAPON, C.A. (page 321)

One of the principal functions of management is to plan ahead. The uncertainty of the future gives no licence to management to forget about tomorrow. It was on this theme that Frank S. Capon spoke in June to those attending the Perspective for Management Seminar held at Queen's University. We are grateful to Queen's University and the author for giving us permission to reprint the major part of his paper "Management Planning" in which Mr. Capon deals with the reasons and scope for planning and the steps to be taken before the final presentation is ready for the company directors.

Well-known to many *Canadian Chartered Accountant* readers, Mr. Capon is treasurer of DuPont of Canada Limited and has been active in

Continued on page 290

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Canadian Institute affairs for many years. He is a member of the Institute of Chartered Accountants of Quebec and a past director of the Controllers Institute of America.

G. G. FISCH (page 327)

Although there has been an ever-growing appreciation of management accounting in recent years, there are still many industrial concerns who find that the nature and scope of historical costs are by no means as easy to understand as they might be. The treatment of "overhead" is one example that falls into this category. Some fear overhead costs, and those responsible for their apportionment try hard to keep them to a minimum. Others find them a nuisance and distribute them in ingenious ways over the various measured activities of the business. In dealing with the problem, Gerald G. Fisch considers that "a segmented approach to overhead control seems to be no longer possible". In his article "A Dynamic Approach to Overhead Control", the author examines the basic elements of the control function and some of the principles of overhead control in their relationship to the overall profit and growth of the corporation.

Mr. Fisch, who has spent the last 12 years in management consultant work, is executive vice-president of Payne Ross Limited and vice-president of Bruce Payne & Associates Inc., management consultants with offices in the United States, South America and Europe. He is a graduate of McGill University and the Massachusetts Institute of Technology and a member of the Engineering Institute, the Society for the Advancement of Management and the American Management Association.

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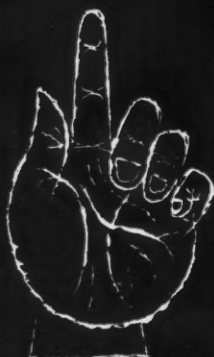
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Continued from page 290

G. M. MURRAY, C.A. (page 333)

The time has passed when only those who live and work on Canada's east or west coasts are interested in shipping, for, with the opening of the St. Lawrence Seaway, ocean ships up to 8,000 ton capacity and more will penetrate to the harbours of the Upper Lakes, far into the interior of the continent. In "Problems of Operating Ocean Freighters", G. Malcolm Murray presents an interesting picture of the various types of charters required for carrying ocean-going cargoes and describes some of the accounting and tax problems that can be encountered. Mr. Murray's interest in the subject is of long standing. "I have been working on the audits of shipping companies for the past 12 years. This type of work has interested me very much and I have tried to find out as much as possible about ocean freighters", he told the Editor.

Mr. Murray is a partner in the Dartmouth, Nova Scotia, office of Nightingale, Hayman & Company. He obtained his certificate in chartered accountancy in 1950 and is a member of Council of the Institute of Chartered Accountants of Nova Scotia.

W. F. MacLENNAN, C.A. (page 339)

One of the most spectacular business developments in recent years has been the trend towards investment in mutual funds. Since the first mutual fund was formed in Canada in 1932, over 30 others have made their appearance with combined assets estimated at more than \$600 million.

In "Operation of Mutual Funds" William F. MacLennan outlines the various kinds of mutual funds in existence in Canada today and emphasizes how important it is for the

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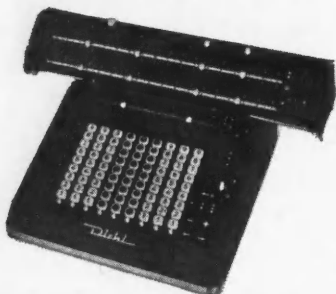
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Continued from page 292

auditor to be thoroughly familiar with the by-laws or letters patent pertaining to each mutual fund when carrying out the audit engagements.

Mr. MacLennan is a partner in the Toronto office of Glendinning, Campbell, Jarrett & Dever and has been a member of the Institute of Chartered Accountants of Ontario since 1936.

EDITORIAL (page 303)

Next month *The Financial Post* releases the names of those companies who have won this year's awards for their annual reports. This will be the ninth annual judging sponsored by *The Financial Post* with the assistance of the Canadian Institute of Chartered Accountants and two other national associations, in order to promote the better presentation of corporate statements. As W. Jack McDougall points out in this month's editorial "Improvement in Published Corporate Reports", there has been substantial progress in recent years in the financial reporting of Canadian companies. At the same time, he has taken a look at some of the current shortcomings in this field and concludes his editorial with suggestions for further improvements which business executives may wish to consider.

Mr. McDougall is professor of accounting at Carleton University, Ottawa, and for the past year has been visiting professor at the School of Business Administration, University of Western Ontario. He has served on the Canadian Institute's committee on Accounting and Auditing Research and on several committees of the Society of Industrial & Cost Accountants. He obtained his certificate in chartered accountancy in 1941 and is a member of the Institute of Chartered Accountants of Ontario.



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NOTES AND COMMENTS



C.I.C.A. Elections

James G. Duncan of Edmonton was elected president of the Canadian Institute of Chartered Accountants at the 57th annual meeting held in Vancouver on September 14. He succeeds John L. Helliwell of Vancouver. Mr. Duncan is a senior partner of Deloitte, Plender, Haskins & Sells, Edmonton.

John A. Wilson of Toronto was elected first vice-president and George W. Hudson of Moncton, second vice-president. Regional representatives appointed were John Hyslop, St. John's, James W. Abbott, Winnipeg, and Howard I. Ross, Montreal. Douglas A. Ampleford of Toronto, was re-elected treasurer. Executive secretary of the Institute is E. Michael Howarth, Toronto.

Governor-General's Award

At the annual conference of the Canadian Institute, Irving L. Rosen, Toronto, was presented with the Governor-General's gold medal and one of two Edmond Gunn prizes for achieving the highest average standing in Canada in the 1958 final uniform examination. The award was made by Robert N. A. Kidd, chairman of the Board of Examiners-in-Chief.

Winner of the C.I.C.A. silver medal and the second Edmond Gunn prize for second place in the final examination was Geoffrey R. Conway, Vancouver. The C.I.C.A. silver medal for the highest standing in the intermediate examination went to Wilhelm Detlefson, Calgary.

American Bankers' Attitudes

"Bankers' Attitudes towards the C.P.A." is a new publication in the Economics of Accounting Practice Series of the American Institute of Certified Public Accountants. The 44-page bulletin is based on the findings of a survey conducted for the Institute by the credit investigators of Dun & Bradstreet. The bulletin not only reports and interprets the findings of the D & B survey, but suggests steps that accountants might take to improve their relations with bankers. Copies of the bulletin are available at \$3.50 each by writing to the American Institute of Certified Public Accountants, 270 Madison Ave., New York 16, N.Y.

Bank Clearing

Value of cheques cashed in the first six months of 1959 increased 13% over the 1958 period to reach a new record total. Totals were higher for all economic regions, Ontario leading with a gain of 17%.

Accountants in the Netherlands

A bill regulating the accountancy profession in the Netherlands is being considered by the Dutch Parliament. Among other features, it introduces a register in which the names will be entered of all those who have passed a university accountancy examination or have passed the accountancy examination to be held by the new professional organization which is to be established under the Act, viz., the Netherlands Institute of Registered Accountants. The mere title of "ac-

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Continued from page 296

countant" will not be protected. The following persons may, during a certain period after the Act comes into force, qualify:

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1959 Canada Handbook

Containing a new and up-to-date portrayal of the Canadian economy and of Canada's political, social and cultural development, the 1959 English edition of the popular *Canada Handbook* has been released. Thirtieth in the series, this year's edition runs again to over 300 pages and as usual is profusely illustrated. The price is \$1.00 a copy. Orders should be addressed to the Queen's Printer, Ottawa and be accompanied by a cheque or money order payable to the Receiver General of Canada.

Foreign Trade

Commodity exports to the United States in July were 14% higher in value than a year earlier to make a gain of nearly 11% for the seven months of this year. Shipments to the United States were responsible for an increase in total export trade to \$2,850,400,000 to the end of July this year from \$2,803,000,000 in 1958, sales to the U.K., other Commonwealth countries and all other countries being below last year.

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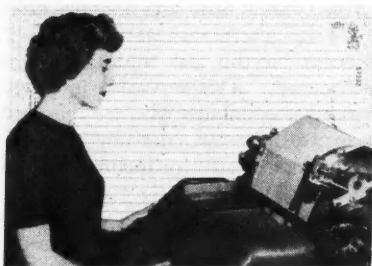
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Dictionary of Canadian Biography

The University of Toronto press has announced the founding of a Dictionary of Canadian Biography, the purpose of which is to provide full and authoritative biographies of every noteworthy Canadian from the earliest times of historical record. An immediate start is being made on this major undertaking in Canadian publishing, and it is hoped that very great progress will have been made by 1967 as a fitting commemoration of Canada's century of Confederation.

In the News

ALAN PATERSON, C.A. (Alta.) has been appointed secretary to the Royal Commission on the Great Slave Lake Railway.

Month End Rates of Exchange

This column now lists nominal rates of foreign currencies at the close of business on the last trading day of each month. This service is intended to assist accountants who are required to express foreign currency amounts of Canadian funds for income tax and other purposes.

CURRENCY EXCHANGE RATES

The following nominal rates of exchange are supplied by The Canadian Bank of Commerce, International Department, Head Office, Toronto, as at 4 p.m., August 31, 1959:

Australia (pound) 2.14%; Belgium (franc) .0192; Denmark (kroner) .1390; France (franc) .00196; Germany (d. mark) .2285; India (rupee) .2010; Italy (lira) .00155; Mexico (peso) .0767; Netherlands (guilder) .2530; New Zealand (pound) 2.67%; Norway (kroner) .1345; Sweden (kroner) .1850; Switzerland (franc) .2215; Union of South Africa (pound) 2.68%; sterling in Canada 2.67 - 2.68; sterling in New York, 2.80% - 2.81; U.S. dollars in Canada, 4% - 4%.



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Editorial

IMPROVEMENT IN PUBLISHED CORPORATE REPORTS

RECENT ARTICLES on published corporate reports point to substantial improvements in the financial reportings of Canadian companies. In turn, report contests and yearly comparative studies attest to a continuing evolution in the content and form of the corporate statements. Just what is the model of an effective contemporary report as discerned from these articles, and what factors have contributed to the current reporting standards? Everyone connected with the reports in any way is interested in these questions; the answers should aid both in assessing the status of individual reportings and in establishing tasks still to be done.

The current literature sets up an effective report as one which conveys in an understandable form the relevant financial facts about a business. Framed from the shareholders' viewpoint, such a report seeks to create in the minds of its readers an understanding of the particular business unit, its purposes, people, problems and possibilities. Because the report is essentially a communication device directed to economic decision-making, its every aspect considers the questions of the inquiring reader. To this end the effective report sets up criteria by which management itself is measured. Summarized financial headlights, graphic portrayals, special emphases in the directors' commentary all assist in the discernment of meanings and trends. Furthermore, the model report is clear and unambiguous, standing as a testimony to the fact that the words "report" and "rapport" have a common root! The figures area of the report consists of various interrelated statements: a prominently displayed auditor's report (to stress the concept of objectivity), a detailed income statement (to emphasize the importance of earning capacity and to enable meaningful analysis), a comparative balance sheet and funds statement (to tie in financial positions with interim resource flows) and a long-term, comparative summary of operational and financial data (to give perspective to the present statement). Throughout, the statements make use of contemporary terminology, account classification and standards of disclosure; footnoted reasons indicate non-conformity to commonly accepted practices.

If the foregoing summarizes our current concept of an effective report, what factors have aided in its development? These are many, and representative are the following: the need for increased public financing, the widened spread in shareholdings, the awareness by business of social responsibilities, the government's requirements for more adequate reporting, the use of the report in public relations. In turn, interested individuals and groups have worked diligently on more precise standards; from professional bodies, from within industry and the universities have come floods of interacting articles, bulletins and recommendations. Finally, enlightened directorates, by raising their own concepts of an effective report, have created upward pressures upon the level of accepted practices.

But while acknowledging progress in our reporting and while giving credit to its origins, we must still consider present shortcomings so that we may look to the future. Are the present standards being spread quickly enough? Are the reporters making fullest use of new reporting devices? Are the reportings keeping pace with the economic and scientific developments whose financial significance they are attempting to portray? These questions will go unanswered, but they are paramount when we consider the truly significant role of the annual reports. The ability of each competitive business to effectively convey its purposes and achievements is basic to the continuation of our free-enterprise capitalism. In one sense the way in which our private corporations use their reportings may indeed determine their individual and collective existence. Since the device of the annual report does have such great economic and social import, what are some of the specific improvements to be expected in the near future? Perhaps foremost there will be a greater use of interim statements to provide current information on the fast-paced movements in our economy. Also, we may expect to see "supplementary statements" reflecting the effects of inflation upon the accounts. Meanings and methods will be narrowed still further and industry-wide standards will spread to enable comparisons among the components of an industry. Management, in turn, will perhaps be inclined to more fully disclose the broad outlines of future planning. Companies will continue to acknowledge their broader social responsibilities so that the reports will become a means of democratic communication. This fuller-stewardship concept may well place a responsibility for public reporting upon other major institutional units within our free-enterprise society, even when the entity is not an incorporated limited company.

A Program for Product Profitability

RONALD F. HOGAN

THE GREATER the product diversification of a manufacturing enterprise, with products representing complex assemblies of individual components and sub-assemblies, the more challenging is the problem confronting executive management for determination of specific and product profitability. Single-product and simple-process concerns are adequately served in this regard by traditional accounting accumulations and reports. Contrariwise, highly specialized techniques are mandatory in manufacturing plants possessing complex product integration patterns. An automotive basic manufacturing division, producing engines, axles and transmissions, as well as numerous large and small stampings, tools and dies, bolts and nuts, etc., is a typical illustration of the latter type.

This management problem has many facets, and its solution is consequently complex. Stated succinctly, it involves the development of a formal program for:

1. Intelligent appraisal of the current profitability of each completed product sold.
2. Supporting analysis to reveal the contributions of integral parts, detailed by operation, in the light of

available competitive measurement.

3. Resultant disclosure of areas that are not competitive and where cost performance is weak.
4. Specific determination and initiation of action to effect cost improvement.
5. *Ex post facto* analysis to reflect to what extent prescribed action and desired result shall have subsequently materialized.
6. Constant probing for the utopian economic balance between purchased and manufactured components.

Adoption of such a program implies, of course, acceptance of the sound premise that exposure of specific profit experience to the searchlight of stringent competitive influence provides the ultimate criterion of the state of corporate health. This premise does not mean that measurement of cost performance to established work standards, budgets, etc. is of secondary importance. The latter still remains the accepted tool for efficient internal control, but supplements, rather than supplants, the measurement of profit against outside competition.

It is conceivable that perfect performance to existing internal standards could produce unwarranted complacency where competitors were actually performing to tighter targets, with better methods, simpler processes, etc. In other words, established cost controls may maintain stipulated performance standards, but detailed product profit analyses highlight areas where improvement is required for the maximum health of the industrial patient. Such a metaphor views a large manufacturing plant as a living organism, because of its multiplicity of perfectly synchronized functions. The organism is controlled and directed by the management "brain" through the labour force "nerve system" and the facility "muscles", all throbbing in unison for creative accomplishment. In considering the six stated facets of a product profitability analysis program, this simile of medical treatment will be pursued.

Appraisal of Current Profitability *("The Consultation")*

The primary step, of course, is to establish the existing degree of profitability for each product in the condition it is shipped from a plant at the time of the sale. The sale may be to an outside purchaser or to a different plant of a decentralized company for incorporation into a larger assembly. An industrial engine sold to a logging company operating in the isolated northern woods is an example of the former; a passenger car engine shipped to an automotive assembly plant located in a different community is an example of the latter. The revenue from the former transaction would derive from a selling price developed along traditional lines. The revenue from the latter would depend

upon inter-divisional transfer prices negotiated between the two affected components of the company. In either case they should be examined, for the purpose of this evaluation program, to see that they measure favourably with comparable competitive prices. This is necessary because inflated selling prices tend to produce depressed sales volumes and result in higher unit costs, thus dissipating profit margins that may have appeared satisfactory at one time. A cardinal rule, therefore, in analyzing profits of products, is to measure them in the light of best competitive pressure, which is generally synonymous with the cost of outside procurement of equivalent articles.

A special program is normally required to determine the existing status of profitability because cost of sale and revenue accounts are not always segregated by individual products, but quite frequently represent groupings of related items. For example, 200 different stamping parts and assemblies for inter-divisional transfer may be accommodated by one cost of sale account and one revenue account. The entire group may reflect a nominal profit, but this must not be construed as evidence of individual soundness or maximum potentiality, which can be discovered only by an item-by-item analysis.

The essence of the initial step, therefore, is to compare, product by product, the accounted cost with the selling price, adjusted where necessary to represent valid market conditions. This elementary stage will indicate the general tone of the enterprise just as a patient's pulse, temperature and blood pressure will reveal his overall condition. The initial profitability "consultation" therefore tests

the tempo, normalcy and elasticity of the manufacturing processes, disclosing where operational lassitude, congestion and constriction may be sapping corporate vitality. Any such disclosure is an implicit plea for more intensive examination.

Analysis of Contributory Factors *("The Laboratory Tests")*

Following the cursory analysis described above, products may be listed in order of profitability, so as to identify and isolate those items susceptible to significant cost improvement action. These should obviously form the group requiring immediate attention.

The second stage is to subject the selected group to a detailed, critical cost breakdown, by constituent parts, cost elements, departmental accretions, operational processes, etc. The object is to pinpoint those specific components, cost factors and actual operations that appear to be uneconomical. Detection and identification of such conditions depend to a considerable degree on the availability of outside measurement data. Here is where the purchasing function contributes invaluable help through its intimate knowledge of the competitive market and representative vendor cost experience. Associated companies or related plants within the same company also provide possible sources of comparative information. It is the function of the product cost analysts to amass and interpret competitive data in sufficient detail for judging the reasonableness of the developed cost breakdowns. This step requires intensive research and analytical skill in order to bring into sharp focus all offending conditions. It may be likened to special hospital exploration,

involving blood tests, X-ray examination, etc., revealing deep-seated pathological disturbances, thus permitting intelligent diagnosis not otherwise possible.

Disclosure of Uncompetitive Areas *("The Diagnosis")*

The sequel to the above outlined steps is the automatic highlighting of the underlying factors provoking unsatisfactory profit performance. The possible permutations and combinations of uncompetitive influences are numerous. Sometimes a single cause is the depressive agent. For example, a pattern may emerge to the effect that administrative overhead appears excessive, representing a surcharge too heavy for the volume of business to sustain. More frequently, there is a combination of contributing forces. As a case in point, exorbitant direct labour content may indicate awkward departmental layouts, overly-restrictive tolerances, cumbersome production methods, etc.

Another conceivable disclosure may be excessive tooling cost representing unduly elaborate die design and more permanent die construction than warranted by the model life of the subject parts. A further possibility is the detection of unbalanced manufacturing expense allocations for two components sharing a common overhead rate applied to their direct labour, when in reality one part is produced on automated machinery with little direct labour and significant manufacturing expense, whereas the other is produced on general purpose machinery with considerable direct labour and nominal manufacturing expense. It is axiomatic that the use of a common departmental overhead rate would in this case allocate too

little expense to the former part and too much expense to the latter. Any vital management decision prompted by such accounted cost results would be obviously misguided. Such conditions are frequently unrecognized unless there is an analysis of specific product profitability.

A valuable feature of this intensive program is that every facet of the cost picture is progressively subjected to minute and objective inspection. Management is thereby supplied tangible evidence of exactly what is unsatisfactory, as well as where and why it is unsatisfactory. Only by intelligent diagnosis can effective and corrective action be prescribed. No competent physician issues remedial prescriptions without first ascertaining the nature and causes of the ailment.

Initiation of Cost Improvement Action ("The Prescription")

Having fully exposed the areas and conditions responsible for unsatisfactory profit results, concentrated attention must now be devoted to the all-important task of correction. No generalized approach is adequate for such a challenge. As the indicated weaknesses have been explicitly defined, so must the remedy be specifically prescribed. To illustrate, the following lines of action may be conceived and implemented to meet the conditions highlighted by the four examples outlined under the "diagnosis".

(a) A special program to analyze how essential is each clerical function should be initiated with a view to lightening the administrative overhead allocation. Unnecessary forms, reports and services should be methodically eliminated. Optional activities, justifiable and desirable in periods of

higher sales, should be curtailed commensurably with a supportable overhead structure. Economy-consciousness should be engendered to resist the steady mounting of paper work. Emphasis in this example is obviously directed to the role played by office and staff personnel.

(b) The second example carries the investigation to the very heart of the production operations. The problem here is not only to improve operating efficiency under existing conditions, but also to introduce improved layouts, specifications, methods, etc., so as to lower the standard cost level itself. The program in this instance could be systematically developed through adoption of a standard form entitled "Operational Check List". This form would enumerate, under major captions, every conceivable question that might be raised concerning each production operation under review. The major captions might include rough stock, fixtures, cutting tools, coolant, quality, gauges, machines, safety, operational sequence, etc. The questions under each caption should be so phrased as to permit a yes or no answer by a simple check mark in an appropriate column. A brief sampling of typical questions is listed below:

Is machinability of stock constant and satisfactory?

Do locators permit easy loading?

Is the fixture the direct cause of any scrap parts?

Could automatic ejection be profitably employed?

Do chips pack into the tool?

Does the operation require excessive adjustment by operator?

Are machine times adjusted for

maximum tool life at optimum labour cost?

Can operation be eliminated, combined or cycled?

Are in-line floats adequate and sustained?

Do scheduling problems cause too frequent and costly tooling set-ups?

An operational check list would be prepared for every operation of each product under analysis. Copies would be distributed to each interested supervisor and other affected personnel for independent completion, thus enlisting the widest sphere of job skill and familiarity to suggest improvements. Adequate space should be provided on the list for appropriate remarks intended to amplify and qualify the checked replies. The completed forms would then be coordinated and sifted by a central agency, with potentially helpful reactions and proposals appraised and processed for approval and execution. Anticipated savings would, of course, be evaluated in the light of the cost of effecting indicated improvements. Each approved change should be timed so as to be incorporated without causing disruption, having regard for possible tooling obsolescence, etc. The authorized improvements would be interpreted as formal commitments on the part of production supervision and be outlined as such on product profitability trend analysis forms for periodic review. Emphasis in this example is obviously directed to the role played by operating personnel.

(c) The third example directs attention to the psychological aspect of economy possibilities. Each organizational component naturally endeavours to produce the most durable and

highest quality product appropriate to its function. But when the item in question is a tool, die or fixture for producing a part, the overriding consideration should be to design and fabricate it as economically as possible, commensurate with fulfilling its particular purpose with functional acceptability. Where its useful life is limited to a model year run, it is not sound to satisfy professional impulse to build into it the utmost permanency and polish. This would be tantamount to viewing the means to an end as the end itself. On the other hand, tool designers and builders can contribute to greater profitability by such ingenuity as reducing die section dimensions to suit the stamping rather than the punch press bed, designing form dies rather than draw dies to minimize the amount of metal required for punching out individual stampings, etc. An enlightened program for designing and incorporating maximum economies into the special tooling would thus be prompted by unfavourable comparison with competitive tool shops. Emphasis in this example is obviously directed to the role played by technical personnel.

(d) The final example calls for refinements of overhead distribution. Where departmental overhead rates are employed, there should be a significant degree of similarity among the various products, processes and facilities of a given department to ensure that the overhead is applied realistically to each part. In a multi-product department with heterogeneous conditions, as in the cited illustration, a program should be undertaken to provide more reliable accounted cost results. This may be achieved by sectionalizing the department for overhead rate purposes, thus developing a distinctive rate for each section

of the department enjoying relative internal uniformity. It is conceded that overhead reapportionment does not enhance profits *per se*, but accurate costing is nevertheless a valuable adjunct to product profitability determination. Emphasis in this example is obviously directed to the role played by accounting personnel.

The above examples may sufficiently intimate the importance of a well conceived, properly balanced and conscientiously executed cost reduction program. Just as therapeutic prescriptions are frequently compounded of several ingredients, so does cost improvement embrace numerous channels of corrective action. All segments of the organization must work as a team to ensure success.

Measurement of Actual Accomplishment

("The Annual Check-up")

No product profitability analysis may be satisfactorily concluded until the committed improvements have been subsequently reviewed to measure the degree of accomplishment. Scheduled *ex post facto* analyses comprise an indispensable element of a program to maximize profit. This feature may be systematically pursued through the trend analysis form referred to earlier. The current revenue, itemized cost factors, annual volume, economic profit, accounted profit and pertinent percentages would be listed for a given product in columnar arrangement. The next column would incorporate the value of the pledged improvements, by specific cost factors, forecasted as a result of the foregoing intensive appraisal. This column would indicate the date or dates that the new benefits are an-

ticipated. The remaining columns would provide for the recording of actual experience at some subsequent date and at recognized intervals until the profit contribution of the subject product is considered adequately regulated.

This follow-up phase is of critical importance. Many programs are auspiciously launched, but founder through preoccupation with unrelated intervening issues. A salutary prescription may get as far as the medicine cabinet, but not until it is introduced into the bloodstream can the patient expect to feel its beneficial influence. The *ex post facto* analysis may be likened to a periodic check-up that reveals the effectiveness of the treatment and also detects any incipient deterioration before serious damage can ensue.

Balancing of the Make-or-Buy Sourcing Equation

("The Metabolism Equilibrium")

An essential element of the program, in a plant with a complex product pattern, is the examination of each component to ascertain the comparative economics of purchase versus manufacture. In large assemblies, comprised of a multiplicity of varied components, there are undoubtedly certain parts that can be procured from selected outside sources more economically than they can be manufactured in the plant from raw material. Volume is generally a determining factor. Certain model parts are not required in sufficient quantity to justify an elaborate internal facility, whereas vendors specializing in supplying such parts to a complete industry are equipped and able to quote more economically.

Product profitability is therefore en-

hanced by an appraisal of existing plant capacities, additional capital investment requirements, vendor quotations, forecasted savings for alternative choices, return on investment and payout period calculations, etc. New products should be progressively studied for incorporation into the production pattern. Existing components should be continuously appraised with a view to advantageous procurement. Such decisions, of course, should be made after comparing the out-of-pocket costs involved in either alternative. Total accounted costs are misleading in make-or-buy economic studies because they include allocable fixed expenses already irrevocably incurred in the plant regardless of the final make-or-buy decision. It would not be sound to remove a component from the plant because its total accounted cost was marginally higher than an outside quotation, only to

realize that the significant element of its fixed expense remained for absorption by other products already carrying a sufficient burden. Just as a balanced metabolism is fundamental to robust health, even so a sound make-or-buy pattern is fundamental to healthy profits.

A product profitability analysis program is designed to produce an atmosphere of cost consciousness and enthusiasm for profit improvement throughout the organization. It is calculated to supplant natural inertia with a momentum that will revitalize the entire profit-producing machinery. As recovery of health is often commensurate with the degree of cooperation with the attending physician, so a company's competitiveness status reflects the degree of intelligent, resolute and cohesive administration of its product profitability analysis program.

Does Big Business Breed "Yes" Men?

Seven out of ten major industrial company presidents believe that the "organization man" does not exist in their companies or, if conceding that he does exist to some degree, do not regard him as a serious threat to traditional U.S. individualism and, more specifically, to executive initiative. This is the key finding of a survey reported in the March 1959 issue of *Dun's Review* and *Modern Industry*. But two in ten of the company heads see a very real danger that as corporations grow bigger and more complex, management personnel at every level tend to become submerged as individuals and play the role of "yes" men. Such is the verdict of "The Presidents' Panel," a group of more than 150 company presidents, three out of four of them heading corporations among the 500 largest in the U.S., — who are participating in a series of bi-monthly surveys on top-management subjects.

Most of the presidents who concede that the conformist exists to some degree in their organizations tend to regard him without alarm and believe he is largely confined to the lower echelons of management. Successful individualism, some respondents point out, is what attracts attention and is promoted, and the most capable top executive, it is widely held, is likely to be "a happy mixture" of individualism and conformity.

—*The Controller*, June 1959.

Earnings Ratios in Valuing Companies

LEONARD E. BARLOW

ONE OF THE MOST important and basic considerations in appraising the value of a business enterprise, either from the standpoint of investing in its shares or purchasing control or outright ownership, is earnings — past, present and future. The obvious reason for this, of course, is that businesses exist to make profits for their owners. Before committing any funds, therefore, the investor in a business usually seeks to find out whether or not its profit potential justifies the price he is asked to pay. In the process, the profitability of the investment under consideration probably will be compared with that of other possible alternatives in the same or other lines of activity.

Measuring a company's profitability from the owner's standpoint is accomplished primarily by the use of two financial ratios. These are (1) the price-earnings ratio and (2) the ratio of net profits to net worth. How these ratios are computed and used are examined in the sections that follow.

The Price-Earnings Ratio

The price-earnings ratio is the ratio used by security analysts and financial statisticians to judge the over-valuation or under-valuation of common shares in the market place. The ratio

is computed by dividing the latest annual net profit per share figure, actual or estimated, depending upon availability of the most recent quarterly reports, into the current per share market price. Thus if a stock is quoted at \$10 per share and annual net profits are reported to be \$1.00 per share, the shares are said to be selling at 10 times their earnings or have a price-earnings ratio of 10 to 1. Another interpretation is that the ratio indicates the number of years of current per share earnings that are contained in the market price of the shares, that is, the number of years it would take at the current rate of earnings to recover the market price.

As a general proposition, the higher the number of times that a stock sells in relation to its per share earnings, the less attractive does an investment in the shares become relative to other possible opportunities. Conversely, the lower the price-earnings ratio, the more attractive the investment.

Price-earnings ratios are also frequently used as multipliers in capitalizing a company's earnings to estimate its value as a going concern from the owner's standpoint. This is done by first determining what is an acceptable price-earnings ratio to use as the multiplier. An acceptable price-earn-

ings ratio in this case is usually based upon comparisons of the price-earnings ratios for the common shares of other companies in the same or allied fields or by taking an average of the price-earnings ratios of a number of selected companies. Very often those interested in the valuation will have their own ideas as to what constitutes an acceptable ratio under the circumstances. In any event, the net profits of the company are capitalized by multiplication by the ratio selected. The resultant figure is the estimated value placed on the equity interest of the common shareholders.

For example, assuming net profits of \$100,000 and a price-earnings ratio of 10 to 1, then, by multiplication, the value placed on the equity interest would be \$1,000,000. A per-share value for each common share would be arrived at by simply dividing the valuation figure by the number of common shares in the company's capitalization.

This technique of valuing a company's ownership interest is almost a prerequisite in providing a starting point from which the terms of any sale, merger or program of equity financing or recapitalization may be established.

The 10 to 1 Concept

In actual practice, a price-earnings ratio of 10 to 1 has long been established as the criterion of stock investment and, by inference of the going concern value of a business, i.e. a business is worth 10 times its earning power. The basis for this is found in the fact that capital is not attracted to an industry where risk is involved unless a return rate of at least 10% can be foreseen.

While a 10 to 1 price-earnings relationship has long been recognized as a bench mark in judging the market value of stocks, other factors may justify a stock selling on the basis of a higher or lower price-earnings ratio. Regulated industries, such as public utilities, and companies dealing in essential products, such as dairies, bread and bakery companies, have a steadier volume of business and level of earnings. For these reasons their shares tend to sell on a higher-price earnings basis. This is also true of companies which have a strong competitive position in their industry. The shares of companies with aggressive research facilities that enable them to develop new high profit products such as the ethical drug and chemical companies, and of companies engaged in new fields having a high anticipated growth rate such as the electronic industry also tend to sell on a higher price-earnings basis. On the other hand, companies that depend on selling their products in export markets, companies engaged in the production of heavy capital goods and companies that rely on government contracts tend to sell on a lower price-earnings basis.

Some analysts question the validity of the 10 to 1 price-earnings ratio as a modern-day criterion of share valuation. They contend that under conditions of the managed economy, wide disastrous swings in the business cycle are virtually eliminated, thus moderating a risk element considered inherent in all businesses. Also, through improved management techniques such as short and long-term budget forecasting, new product research, market research and advertising, businesses have greater control over their destiny and can remove or countercheck

many normal business hazards with a consequent beneficial effect on the stability of earnings over longer periods of time. These developments, it is argued, justify consideration of a price-earnings criterion higher than the heretofore widely accepted 10 to 1 concept.

Much of this philosophy of share valuation is new, and is still relatively untested and unaccepted by security analysts. But in any event there is usually a wide difference in theory and actual practice, for when it comes to putting money on the line, a 10 to 1 price-earnings ratio still appears to be considered a key yardstick.

There are, however, two sets of circumstances which may result in a departure from customary price-earnings standards. One is distinctly Canadian in application due to tax legislation which allows Canadian investors to claim a 20% income tax credit on dividends received from taxable Canadian companies. Because of this tax advantage, which allows investors to gain a higher after-tax yield from their investment, there has been a tendency to bid up the general level of stock prices. The net effect has been for Canadian stocks, dividend-paying ones in particular, to sell on a higher price-earnings basis than would otherwise be the case.

The other circumstances are related to money market conditions which may exist from time to time. When tight money conditions prevail and higher than average rate of investment returns can be obtained with the acceptance of little or no risk by investing in prime bonds, it is relatively less attractive for the investor to invest in common shares of business enterprises with all their attendant risks unless there are greater inducements to do so.

One such inducement, of course, would be to obtain the shares on a lower price-earnings basis. The tendency under such circumstances, therefore, would be for the market to place a lower price-earnings valuation on stocks than it otherwise might. Conversely, when easy money conditions prevail and lower than average rates of investment return obtain, the market will tend to place a higher price-earnings valuation on stocks.

Circumstances may occur under which high stock price-earnings ratios may exist for a time alongside high yield rates on prime bonds. This will happen during a period characterized by inflationary tendencies when investors become concerned with the decline, actual or threatened, in the value of the dollar. To hedge against inflation they will buy common stocks in preference to fixed income securities such as bonds and preferred shares. As fears of inflation become more aggravated, bonds become less acceptable as an investment medium and their prices are depressed to the point where higher than average yield rates obtain. At the same time, the demand for stocks increases and their prices are bid up to the point where they are discounting future earnings to a considerable extent and sell on a higher than average price-earnings basis. Such a situation seldom lasts for long. Eventually the underlying conditions which brought about such price divergence undergo correction and more normal relationships between bond and stock values are re-established.

Privately Owned Companies

In the case of small companies which are privately owned or held by

a small group and have no quoted market for their shares, the question arises as to how they should be valued on a price-earnings basis. Without a quoted market for their shares, the per-share price factor is missing in computing a price-earnings ratio for comparative purposes. Nor would the selection of an arbitrary price for the shares serve the purpose since it would result in an arbitrary ratio that would be of questionable value. But the problem can be met by selecting from the price-earnings ratios of publicly-owned companies in the same or allied fields an appropriate multiplier by which the earnings of the privately-owned company may be capitalized to arrive at a valuation.

Since this method would evaluate a private company by the same yardstick as for a public company, it poses the question as to whether or not it is a fair and proper basis of valuation. In other words, is a privately owned company worth as much, or more, or less than a public company, everything else being equal? There is no hard and fast answer to this question as circumstances alter cases. But on balance, the value of a small privately owned company probably should be discounted from that of a public company. For one reason, its shares are not as readily marketable as those of a company whose shares are publicly traded and have an investment following. This is usually a very real disadvantage from the standpoint of most investors who do not wish to risk being "locked in" with their investments. Even if a public offering were made of its shares to provide such marketability, they would undoubtedly have to be more attractively priced than the shares of a public company to capture the interest of

investors. Such a price differential would be minimized if the private company enjoyed good public relations and was well known to the public because of the high quality of its product brands or for other reasons whereby little or no selling of its "name" to investors would be required.

It must be recognized, on the other hand, that situations exist where marketability of shares is not an important factor in reaching a mutually satisfactory valuation. Also, a small privately owned company, with an owner-identified management, may in fact work its capital to greater advantage than a similarly situated public company. Comparatively, it should therefore be worth more on a sale, particularly if a suitable deal is worked out for the same management to continue to operate the company with the same effectiveness as when it owned it. Many other factors, covering the whole range of reasons why one company may want to buy another, enter into the considerations surrounding the valuation of companies that any one of them in a given situation might readily justify establishing a higher price-earnings value for a privately owned company compared to a public one.

Minority Interest

Another question that arises in considering the use of the price-earnings ratio to value companies is that of valuing a minority interest as compared with a majority interest or outright ownership. Here again there is no hard or fast answer to be given. Under normal circumstances it seems logical to assume that a minority interest should be valued at something less than a corresponding proportion-

ate amount of the value placed on the entire ownership interest. A 25% minority interest, in other words, should be worth something less than 25% of the value placed on the company as a whole. The reason for this, of course, is the inferior position occupied by the minority interest *vis-à-vis* the majority interest in the event of any showdown over unresolved questions of policy.

Where ownership of a company is widely dispersed, however, a minority interest of, say, 20% to 30% may in fact carry effective control. Under such circumstances, it may well be that a minority interest of that magnitude is worth something more than a pro rata amount of the value placed on the entire interest. For one reason, a relatively smaller capital outlay is required to obtain control by such means than would be the case if control could only be acquired by purchasing a majority interest. For another, there may be important subsidiary benefits to be gained from holding a minority interest in a company, such as an assured supply of a required product or an assured outlet for production.

Ratio of Net Profit to Net Worth

The second financial ratio used to test the profitability of investment in a company is the ratio of net profit to net worth or, as it is sometimes expressed, the percentage of net profit earned annually on the stockholders' investment. It is computed by taking reported net profits as a percentage of the shareholders' equity, i.e. the aggregate of the capital stock and surplus items as shown by the balance sheet.

In making the calculation, any

voluntary or surplus reserves appearing among the liabilities should be added back into the total of the capital and surplus items. This is done on the grounds that such reserves are usually voluntary appropriations from the earned surplus account and may ultimately be reinstated, in which case they form part of the shareholders' equity in the business.

If a company's capitalization includes preferred shares and the profitability of the common shareholders' interest alone is sought, an adjustment should be made in the computation. The claims of the prior ranking preferred shareholders on earnings should be deducted from the net profit figure. The balance of net profits is then computed as a percentage of the capital and surplus items after first deducting the amount of the preferred stock. The preferred stock is usually deducted at its par value or if it is no par value stock then at the value at which it is shown in the capital stock account. If the preferred shares are redeemable at a premium, it is customary in calculating the ratio to deduct the preferred shares at their par value plus the amount of the premium.

Another refinement that is often made in the calculation to provide a more conservative result is to deduct from the aggregate of the capital and surplus items, the aggregate of any intangible assets such as goodwill, deferred charges and patents rights. Where this procedure is followed the ratio is termed *ratio of net profits to tangible net worth*.

The ratio of net profits to net worth measures the earning power of a business enterprise and tests management's efficiency in employing the

capital which the shareholders have at work in such an enterprise. The ratio is also useful in comparing the earnings performance of one company with another or with the average of all companies in the same industry. Obviously, the management of a company which is making its capital work harder and more profitably than another is doing the better job, everything else being equal. As mentioned earlier, business enterprises are created to make profits. Net profits, in the last analysis, are the measure of commercial success attained by management in all three management functions — merchandising, operating and financial.

Typical Net Profit Ratios

Any compilation of the ratio of net profit to net worth for a large assorted

group of companies will show a wide range of results. This is due to the variations in the profitability of different industries, in capital structures and financial conditions and in managerial competency and risk. When the average is taken of the ratios for such a diversified group of companies, it will be noticed that the percentage which they earn on their net worth averages close to 10%. For example, the percentage net profit returned on net assets for a group of 3,521 United States companies was 11.3% and 10.6%, respectively, in 1956 and 1957. Such average results would appear to lend further weight to the concept mentioned earlier that a business is worth 10 times its earning power.

For many years the Dun & Bradstreet credit organization has com-

RATIO OF NET PROFIT TO TANGIBLE NET WORTH FOR CERTAIN LINES OF BUSINESS, 1957

Line of business	Number of concerns	Inter-quartile range	% of net profits on tangible net worth
<i>Manufacturing:</i>			
Industrial chemicals	67	Upper Quartile	13.24
		MEDIAN	10.04
		Lower Quartile	7.21
Foundries	108	Upper Quartile	13.98
		MEDIAN	9.72
		Lower Quartile	6.27
Paper boxes	69	Upper Quartile	12.10
		MEDIAN	9.49
		Lower Quartile	5.96
<i>Wholesalers:</i>			
Groceries	255	Upper Quartile	12.49
		MEDIAN	6.79
		Lower Quartile	2.94
<i>Retailers:</i>			
Department stores	447	Upper Quartile	8.31
		MEDIAN	5.05
		Lower Quartile	2.13

PROFIT RESULTS OF CANADIAN COMPANIES, 1957 AND 1958

		Ratio of net profit to net worth	
		1957	1958
13	Oil companies	11.1%	6.7%
5	Metal companies	14.0	7.8
69	Iron and steel companies	8.8	7.9
19	Pulp and paper companies	9.8	9.0
7	Transportation companies	3.9	3.4
25	Merchandising companies	9.4	10.3
28	Textile companies	5.7	5.2
10	Milling and grain companies	5.9	6.8
19	Construction companies	10.7	10.6
32	Public utility companies	6.9	6.8
16	Foodstuffs companies	8.7	8.8
12	Beverages companies	9.2	8.8
62	Miscellaneous companies	9.9	9.5
4	Timber companies	6.8	5.5
<hr/>		<hr/>	
321	Total	9.2%	7.4%
<hr/>		<hr/>	

piled a series of 14 key financial statement ratios including the ratio of net profits to tangible net worth. The compilation covers a large number of companies engaged in some 70 lines of business activity and which generally have a tangible net worth of \$75,000 or more. Lines of business activity covered include some 35 divisions of manufacturing, 25 of wholesaling and the balance retailing.

To show the variations in the standard of performance among companies engaged in the same line of business activity and between those in one line of business and another, inter-quartile ranges for the Dun & Bradstreet ratios are worked out. This is done by arranging the ratios in a graduated series with the largest at the top and the smallest at the bottom. The ratio lying half-way between the top and bottom of the series is then designated as the median. The ratio lying half-way between the top and median and

between the median and the bottom are respectively designated as the upper and lower quartiles.

The table on page 317, based on 1957 results, illustrates the inter-quartile range for the ratio of net profit to tangible net worth for certain selected lines of business activity as taken from the Dun & Bradstreet studies.

It will be readily apparent that statistics such as these are extremely helpful in comparing the profitability of a company in which an investment is contemplated with that of others engaged in the same or other fields.

Statistics with respect to the profit performance of Canadian companies are also published from time to time by *The Financial Post*. For example, the table above summarizes a comparison recently published by that publication of the 1957 and 1958 profit results of some 321 Canadian companies engaged in 14 different lines of activity.

Of interest in this table is the effect of a business recession on the profitable operations of business enterprise. As may readily be seen the recent business recession which had its greatest impact during 1958 resulted in most companies experiencing a decline in the rate of return on their investment compared with 1957.

Past Results and Future Prospects

Variations in economic conditions from year to year point up the fact that in making an analysis of the profit potential of a company or companies, reliance should not be placed on the results of only a year or two. To know that a business has been able to realize a 10% on net worth during the immediately preceding year is one thing, but to know further that during the past 10 years a loss was realized in 5 of the years is quite something else. If the long-run experience with an investment in a company is to prove favourable, then the average annual return on the investment should have proven to be adequate at the outset. To test for this factor of stability, annual earnings should be determined over a complete cycle of general business conditions, usually a period of at least 10 years.

In any consideration of investment in a company, some attempt must invariably be made to assess future earnings prospects. While fairly refined and complex statistical measures are available for the purpose, a general estimate will usually suffice. This is particularly so as the information required for a more sophisticated analysis usually is not readily available and the time, effort and skill required for such future projections are often too great to be justified by the results.

In estimating future performance the common technique is to rely upon the recent past record and presume that the future, within fairly broad limits, will be governed by the past. Of course, no future projections are possible without some consideration of general business conditions. But given some appreciation of what the future holds in this regard, the estimate for a particular company tends to be tied to its own strengths and weaknesses as portrayed by past performance.

Use of Source Material

In computing the earnings ratios described above, it is important to note that the profit figure used is that of net profits after provision has been made for corporate income taxes. The government enjoys a "partnership" in business as a result of the income tax it levies. Moreover, this partnership entitles it to a compulsory share of business profits in priority to that of the beneficial owners. Therefore, profit before taxes has no real significance as far as business owners are concerned since the profits are not available to them until the taxes are paid.

It is also important to inspect both the profit and loss statements and balance sheets for any items that may distort a proper computation of these ratios. In small businesses, for example, the reported net profit figure may be inflated or deflated by the extent of the amount charged by owners against earnings for their services. In other cases, the net profit figure may be increased or reduced by insufficient or excessive charges for depreciation than are required under proper accounting procedure. Differences in the basis of inventory valuation may have a similar effect. Sometimes, too,

the amount of invested capital may include assets which are carried at only nominal book valuation. Such factors may cause these measurements of earning power to lose much of their value.

Under most circumstances, it is usually sufficient to accept the financial statements on the basis of the auditor's certification or, if unaudited, as determined and judged by the person making the analysis. Once the validity of the statements is accepted the detailed asset and profit data are, for all practical intents and purposes, taken at their face value.

Since the profit figure used in computing the ratio of net profit to net worth represents an accumulation of earnings over a fiscal period, the net worth side of the calculation should ideally represent the average amount of the asset investment at work during such time. A simple averaging of the net worth value at the beginning and end of the period is generally sufficient for this purpose. In cases where it is known that there has been little or no change in the amount of the investment in assets during the period, a substantially satisfactory calculation can be made by using the figures of either the beginning or closing balance sheets.

Conclusion

While the two ratios just reviewed provide a mathematical measure of financial performance, they should not be used blindly as a substitute for the exercise of judgment. In any investment situation under consideration, the normal thing for the parties involved is to investigate it, compare it, analyze it, check it, think about it and in general bring all their mental faculties to bear on it before arriving at the terms on which they are prepared to deal. Very often such deliberation is merely a prelude to prolonged negotiations in which the art of bargaining receives full play with the better end of the deal being won by the better practitioner of the art. Sometimes too, outside considerations, such as the incidence of the tax liability in a transaction, may weigh more importantly in determining final terms than the fact that satisfactory evidence of financial condition is revealed by a ratio. Subject to such limitations, however, these ratios are highly useful tools in the investigative process of determining the profitability of investment in a business. Intelligently used, they contribute importantly in reaching sound investment decisions.

Taxpaying in Britain, A.D. 97

Tacitus, composing in A.D. 97 the biography of his father-in-law, Agricola, writes thus of the then inhabitants of Britain: "The Britons themselves submit to the levy, the tribute and the other charges of Empire with cheerful readiness, provided there is no abuse. That they bitterly resent, for they are broken in to obedience, not to slavery."

—Rating and Income Tax

Management Planning

FRANK S. CAPON, C.A.

AS A BACKGROUND for this paper it is best to start with an outline of the structure of corporate entity, its scope and its organization, since everything that follows must be interpreted within this framework. The outline will be confined to companies incorporated under the federal Companies Act, although provincially incorporated companies operate under substantially similar legal provisions.

Corporate Structure

The Companies Act provides that any group of individuals (not less than three) may apply for a charter and may be incorporated as a company with the powers set out in the Act and the charter. These powers are extremely broad. In fact, it is easier to say what companies cannot do than what they can do. For example, companies incorporated under this Act cannot run banks or railroads, carry on the business of insurance or issue paper money. In other words, they cannot carry on those very special functions which are reserved to government or to companies incorporated under such laws as the Bank Act, the Trust Companies Act,

the Canadian and British Insurance Companies Act and similar special legislation. Subject to these limitations, a company can carry on the business for which it is incorporated, and exercise all the ancillary powers needed to operate.

A company's by-laws set forth in detail the authority of directors and management, the authority and responsibility of specific officers and the procedures which must be observed in the day-to-day carrying out of the company's affairs. Certain powers and authorities are reserved to shareholders under the Companies Act. For example, the number of directors cannot be changed without approval of the shareholders, and changes in the capital structure can only be made with the approval of the shareholders. The Act also gives certain powers and authorities to the directors, such as the execution of contracts, the declaration of dividends, the appointment of officers and similar important matters. However, the broadest of responsibility for the day-to-day operation of the company may be delegated by directors to officers and management and this delegation is accom-

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lished by the by-laws, or by resolutions passed under the by-laws.

The board of directors is an executive committee of the shareholders, who may delegate their power between meetings to an executive committee of the board comprised of not less than three directors. The executive committee continues to be a part of the shareholder level in the corporate organization rather than a part of the management level, although frequently the existence of such a committee results in the delegation of less responsibility to management.

Management includes the executive officers of the company and other individuals having supervisory responsibility. The power and authority of each officer, or of management as a whole, must be specifically delegated to him by the board of directors and must always be within the limitations set forth in the Companies Act. It is general for the president or managing director to be given the widest authority over the day-to-day operation of the business subject only to policy directions and specific limitations set forth by the board, such as the limitation of authority to spend money on plant construction or to approve salaries above a certain level.

The organizational structure of different companies varies widely, partly because of size but frequently because of personal preference for certain titles or groupings. Fundamentally, however, the various responsibility groups in management are strikingly similar in all companies. For example, the chief executive officer has general responsibility for all aspects of management regardless of whether he is a president, a chairman or managing director. Similarly, all

companies have a financial management responsibility regardless of whether it comes under the vice-president (finance), the treasurer or the controller. For manufacturing companies there will be a production responsibility even though it may be decentralized on a product basis, and there will also be a sales responsibility which may be similarly decentralized. Most companies will have a development responsibility which may or may not include research. There is a similarity of functional responsibilities in every organization regardless of the titles used.

In recent years there has been a great deal of discussion on centralization and decentralization of management and also of the pros and cons of committee management. It is not necessary for purposes of the discussion of planning and of control to consider the advantages or disadvantages of decentralization or of the committee structure. The principles of planning and control apply equally regardless of whether or not a company is decentralized and whether management responsibilities are vested in individuals or in committees.

Reasons for Planning

The only link between an objective and its achievement is the plan of the steps or actions needed to get there and the order in which they must be taken. Those who aim to succeed by planning their course have a tremendous advantage over the great number who have no organized plan; the planners are ready for each development, and can take each necessary decision without hesitation because the various alternatives have been evaluated, whereas those who

fail to plan must scurry around making hasty and ill-considered decisions every time a new development occurs. The planner has command of his course of action, has foreseen the probable difficulties, and has charted his course around them. He keeps his head while others lose theirs, for hurry and surprise are the two most dangerous situations in business.

The person who plans will first make sure where he is at present, and then determine his objectives. The planning of achievement of objective then takes a two-part form: strategy and tactics. The executive must determine the strategy by painting with a broad brush, but he can delegate decisions on tactics, for junior levels of management must be able to make day-to-day revisions in minor aspects of the plan, always keeping within the broad strategy.

The mere committing of objectives and plans to paper will of itself give guidance and generate ideas. Even when only difficulties seem ahead, a formal analysis and evaluation of possible courses of action will give a sense of balance and self-confidence. One great fault of our age is the tendency to rush into new ventures without enough study because of an overpowering fear that someone else may get there first. There is a mad endeavour to leap from the ground to the summit rather than to climb scientifically, disregarding the infinitely greater risks involved in the leaping process. Many things are already known about the future. The Gordon Commission painted a glowing picture of the Canada of 1980, but the timing of the great events foreseen remains cloaked in mystery. Thinking men are trying to establish

rough dates for the major steps, and are working towards these dates; they are planning the actions they must take and the timing of these actions in order to be in the right position in 10 or 20 years. Orderly plans mean fewer unsolved problems, fewer false starts, an absence of random-work. In other words, planning results in a vital decrease in effort and increase in future efficiency, even if the planner himself may not be around to reap the fruits.

Scope of Planning

A plan is no better than the men who make it, and objectives will be accomplished only if the right men are there to take the necessary decisions and actions. The organization function, that is the hiring, training and developing of men, is certainly the most important single task of management, for all of management's achievements must be accomplished through people, and a good organization can only be built up by meticulous planning and careful but firm pruning.

The scope of corporate planning, the degree of formality needed, the frequency of plan reviews, the timing of formal plan submissions, are all matters which must be custom-made for each company. Planning in some form takes place in every company, large or small, but in many it may be unconscious or relatively undeveloped.

Business is a venture, in some ways no different than a family motor trip. If you were taking the family away in the car for a few weeks, you would first obtain guide books, lists of hotels and all other information on the facilities available. In other words, you would obtain all present facts

Then you would consult the maps to determine the best way of reaching your destination. To ensure a successful trip, you would ascertain first what to expect and how to get there and then you would make all necessary reservations in advance; thus you would have guarded against disappointment and unnecessary trials en-route. We all know the kind of problems experienced by those carefree individuals who just barge off in the car at the height of the vacation season without any particular arrangements or plans.

Planning can be summed up as the collection of all pertinent facts which may affect directly or indirectly future results or that part of the future now under study, the thoughtful weighing of those facts to test their accuracy, the evaluation of various pieces of information and the determination of their implications, and finally, the charting of a course of operations, decisions and policies to take the fullest advantage of known facts and assumed events in order to reach the optimum objective.

Timing of formal plans must depend on the speed with which circumstances or cycles change and the degree of flexibility required. The important thing is to have a fixed timing for formal revision, because plans get out of date quickly and only a formal review will ensure that necessary revisions to policies and decisions are made promptly.

Mechanics of Planning

We now come to the specific steps to be taken in managerial planning, the "how to" stage. First, there are two fundamental sets of information to be obtained, the external and the

internal. Then there is the task of evaluating and collating the information, and finally, the presentation of the information in a form calculated to be helpful in determining the objectives and making the decisions needed to achieve them.

(a) *The external factors.* Business is affected intimately by a great many factors beyond its control, such as the general level of prosperity in the country, access to foreign markets, tariff protection against imports, foreign exchange rate trends, general availability of money for capital, governmental regulations on products or merchandising, and many others. The study of these external factors is called economics, and the expert in the field is the economist. It is he who evaluates and estimates the effects of trends in gross national product, taxation and tariff policy, fiscal policy, and foreign trade movements, and political developments such as the European Common Market.

Among their other accomplishments, managers must also become economists of sorts. Some can afford to hire highly skilled economic specialists to advise them, but in the final analysis they must apply their own judgment to the collected facts and must make their own appraisals in reaching decisions for which they cannot delegate responsibility. Every company is affected by external factors, but the importance of these factors is far greater to some than to others.

A very great deal of information is constantly available on the external factors affecting business. The first basic source of information is the Dominion Bureau of Statistics, but coming right behind are the daily press,

financial press, trade publications and a host of other sources.

External factors are having an ever-increasing influence on business in Canada. The world is splitting itself up into trading blocs, and right now Canada belongs to none. Tariffs, quotas, exchange regulations and other weapons are being used increasingly by foreign governments to influence world trade. Since a very considerable part of our gross national product is directly involved in world trade, every company is concerned with these developments. No longer can we think and plan in terms of the local market alone. To succeed, the external factors must weigh heavily in our plans.

(b) *The internal factors.* The internal factors, that is those within the control of management, include potential markets for present products, plant capacities, potential diversification into new businesses, raw material cost trends, wage rate trends, competitive situations and research objectives. In these areas information, whether factual or estimated, is obtained from department managers throughout the company. A certain degree of formality is useful in obtaining this kind of information, as it helps to ensure that all the useful information is forthcoming in a form which can be readily coordinated. The preparation of written reports with formal statements and charts helps operating managers to give more careful consideration to their forecasts and estimates, at the same time providing administrative management with facts in a more readable and more consistent form.

(c) *Evaluating and collating the factors.* Having obtained all the in-

formation which can be useful in planning the future course of the company, the problem for administrative management is to sift the wheat from the chaff, retain only that information which is of real importance for planning purposes, then evaluate each specific piece of information. It is not sufficient to recognize that a certain fact is interesting; its effect on the company, either direct or potential, must be weighed in order to reach the decisions necessary to take full advantage of its potentialities.

In some companies this analysis and evaluation of information for planning is done by an individual or committee at the top management level, but most often it is done as a staff function by the accounting staff. To make plans intelligible the assorted information must be expressed in a common language — dollars — so that it can be put together in the form of total results. All the market potentialities must finally be boiled down to a total figure for forecast sales, and all the diverse items entering into the production of goods must finally end up as a total cost of sales, before profit and return on investment can be calculated. Only when these are reached can there be a policy review with administrative management to determine what steps must be taken to improve results, reduce costs and expenses or diversify lines.

Thus, there is placed on the accounting staff a heavy responsibility to assess masses of information coming from operating management and from the economist and other specialists, to recognize the significance of each piece of information, to have a feel for the degree of optimism or

pessimism that has been built in, and to estimate the degree of accuracy of the final results produced by all the information. The accounting staff must have a broad, if superficial, knowledge of all aspects of operations and external factors if it is to do a useful job in producing a consolidated draft plan for management consideration, and it needs the fullest support and understanding from the other departments. The evaluation of information for planning presents unlimited scope for disagreement between the accounting and other departments. Everyone's goose is a swan, and accountants must strive to be impartial, factual and forthright in submitting their final assessment of the information for management action, even though they may be expressing unpopular views or interpretations.

(d) *The final planning document.* The study of the consolidated report on planning information results in management decisions on the future course of action. Present policies may be confirmed, or changes may be found necessary to correct a fault or to take advantage of a new situation. Sales targets will be firmed up, cost and expense budgets can be fixed, salary and wage rate policies established. The effect of forecast operating results on the company's financial position will be shown, so that decisions can be taken on dividend policy, plant expansion, new capital needs and sources, inventory manage-

ment and the other balance sheet items. Then, after all decisions have been made and there is top management agreement on the planned course for the future, the final plan document can be prepared for directors.

This document may be in one of a variety of forms. It is, however, important to bear in mind that, if the objective is to be reached, each management level must know enough of the plan and its aims to make the day-to-day decisions calculated to keep their units in line with the total objective.

Conclusion

Planning consists of collecting all the pertinent data, both internal and external, making reasonable assumptions on future developments based on present and past facts, and evaluating the information and assumptions objectively, without bias.

The man, or the company, who plans ahead rather than proceeding blindly by intuition is most likely to succeed in the long run. Based on this information, policies must be formulated, decisions made on the course to follow and limits for costs and expenses established; financial needs must be determined, with new capital needs being defined and sources of capital decided. Sufficient information must be given on the plan to all levels of management to enable them to operate according to the long-range objective.

A Dynamic Approach to Overhead Control

GERALD G. FISCH

OVERHEAD CONTROL means many different things to key executives and accountants. Some businessmen fear overhead costs and make every effort to keep them at a minimum. Some accountants in turn find overhead costs a nuisance, seeking to apportion them away in ingenious ways by distribution over various measured activities, such as direct labour, direct material utilization and machine hours.

Further problems arise out of the complexities of product pricing, depreciation, inventory evaluation, taxation or tax department rulings, and management demands for control. All of these factors have seemed to make the whole subject of overhead control a most burdensome topic.

It is, of course, recognized that the specific cost elements involved in different companies and their relative significance in each business are distinct and unique to a given business and to a given industry. However, the principles outlined in this paper may be applicable to several operations. This article is written in the framework of a manufacturing company, which by and large performs all the functions of product conception, design, research, engineering, manufacturing, distribution and others as indicated on table 1. (See page 329)

In order to define our terms, overhead costs are perceived to be all items of cost, with the exception of direct labour and direct material.

Overhead control is defined as cost determination, collection, reporting and executive action, which will tend to yield efficient utilization of all corporate resources.

These definitions are, of course, not perfect. It is readily apparent that the classification of costs into two groups, one essentially direct costs, and the other into a group of supposedly indirect costs is completely arbitrary. However, this arbitrary definition has become modern common usage. Within the last 15 years there has been some controversy in accounting circles between essentially two factions. One takes overhead cost elements and charges them against income as they are incurred. This school describes itself as the direct costing group. Another group which has been around the business scene a great deal longer apportions overhead costs, sometimes in simple ways and sometimes in quite complex and ingenious ways. This writer believes that everyone is sincerely groping for some way of properly reflecting the actual costs incurred over a period of time. As every ac-

countant knows, the real devil in the situation is time, and his assistant is complexity of measurement. Overhead costs confuse a great many people because it is difficult to assess when and how a business achieves a benefit for a specific item of cost incurred today or any other day. Furthermore, the relative value on any basis, whether dollars or units, of any item of overhead cost is equally difficult to determine.

Again in the area of control, much confusion has existed in the past and still exists. Even Mr. Webster or any other authority has difficulty with the word *control*. Several definitions are given: to "exercise directing, guiding or restraining power over; to test or verify; to rule, govern, dominate, direct, restrain or regulate, the apparatus used to control the mechanism or machine in operation".

Elements of Control

For the purpose of this paper it is assumed that control has three basic elements:

1. *The planning element* — where basic decisions are made as to the company's future program.
2. *The staff work* — involved in establishing specific expenditure levels for each activity, and subsequently developing reports showing expenditures in relationship to programs and in relationship to performance.
3. *The directive element* — where the information prepared is used by appropriate executives to take suitable remedial or other action, or no action as they see fit.

These elements can be further simplified into two elements:

1. The staff work involved in planning, measurement and reporting.
2. The authority involved in approving plans, approving budgets and making decisions on the basis of facts and reports provided.

We have thus made certain simplifying assumptions to permit us to deal with both the subject of overhead cost and control. We have also seen how overhead costs differ from direct costs.

Effective overhead control is becoming more and more vital because the speed with which events move and change is increasing very rapidly. It is therefore the contention of this paper that a dynamic approach to overhead control is indicated. Naturally, some companies have been effective in this regard.

While some of the thoughts put forward may be new, the basic environment for these concepts certainly exists in many companies. Undoubtedly many of the ideas will be familiar.

A segmented approach to overhead control, and indeed a segmented approach to any phase of business operation, seems to be no longer possible. We need instead a unified total concept where the various approaches and techniques of management planning and control are integrated into one total framework. Without this integration, the cost of overhead control becomes excessive and the results sometimes questionable.

Possible Principles of Dynamic Overhead Control

In no sense does this paper attempt to solve all the problems relating to overhead control for any given company. Rather, it attempts to develop in fairly broad overall terms a current

TABLE 1

Basic Overhead Costs Elements of a Typical Manufacturing Company

I General Management	IV Marketing
II Product	1 Direct selling
1 Conception	2 Sales promotion incl. advertising
2 Research	3 Sales management
3 Development	4 Warehousing & distribution
4 Engineering	5 Customer service including engineering
III Manufacturing (indirect)	V Typical staff departments
1 Machinery and facilities depreciation	1 Treasury, finance and secretarial
2 Electricity	2 Industrial relations and personnel
3 Light & heat	3 Legal
4 Indirect labour	4 Public relations
5 Supervision	
6 (Non-productive) materials	

and perhaps dynamic approach to the field of overhead control. Table 1 describes some basic overhead cost elements for a typical manufacturing company. To anyone who has had a suspicion that overhead costs must *always* be kept to a minimum, this list must surely provide food for thought in re-examining this widely accepted concept. Again the thought that overhead is "evil" or "bad" must surely also be re-examined in the light of table 1. The proper performance of these functions is vital.

If a company is dependent on new products for maintaining its competitive position, a reduction or elimination of research may be far more detrimental to the overall profit position than any possible benefits of short-range savings. To take another example: A drastic reduction of selling and advertising effort (whence overhead cost reduction) in a declining market may in the extreme put a company out of business in the product groups where this "bad" overhead is eliminated. Thus, we see that overhead is not "bad" but represents cost elements which are an essential

and vitally necessary part of a corporation's functioning.

It appears that almost everyone can understand that value is added to a product through the application of direct labour and direct material. Economists have little difficulty with the concept that value is added by what they refer to as time and place utility which is a key contribution of the marketing function. Nevertheless, there are still a good many accountants and a good many managers who, when sales drop, reduce their advertising budget, weaken their direct selling effort and refuse to order that new piece of machinery which would eliminate the quality control problem on product A. The inadvisability of such a course of action from a rational point of view is quickly evident when we consider that sales may be dropping off because of poor quality and because of inadequate selling coverage. Therefore, a possible first principle of dynamic overhead control suggested by this paper is as follows: *"Consider each overhead cost element in relationship to its individual short and long range contribution to the*

overall profit and growth result." If the element has a contribution to make, and if this contribution has been properly assessed, this cost *must* be incurred if the total corporate objective is to be achieved.

A second possible principle of dynamic overhead control might be as follows: "*Consider that the relative contribution of each overhead cost element must be carefully considered one to another and each to the total cost and revenue.*" Thus, the corollary to this principle is that a reduction in one overhead cost element may only be considered in the light of the effect of that reduction on every other cost and revenue element. The total profit or growth or any other commercial or non-commercial result of an organizational unit is, of course, the direct result of each of the component parts. Therefore, if the activity represented by that element is in balance with every other element a change in one will invariably affect all the others.

Finally we are ready to look at table 2 entitled "Sequence Approach to Overhead Control". Table 2 is built on table 1; essentially table 1 says: "Just as it is true that without direct labour and without direct material a product cannot be manufactured, it is

equally true that without product conception and without research and development, without engineering and design, manufacturing cannot function at all, for the product would not even exist." And, again, products do not sell themselves. Therefore without an appropriate well planned expenditure in marketing effort, sales results are not achieved and therefore selling costs must be proportional to sales results under the circumstances in question over an appropriate time interval. For example, arbitrary control rules such as "Selling costs must not be in excess of 10% of net revenue" have no real validity. In the case of a new product 30% and 40% and 50% might be quite appropriate whereas in the case of an established product 6% may be excessive. Volume variance control in manufacturing is readily understood and the need for standby cost in manufacturing is also fully understood. The same identical philosophy applies to the two other basic functions of product management and marketing, for in the product function once the nucleus group for product conception, research, development and engineering is disbanded, the lag or delay time in producing future new products may be long indeed. Again, certain minimum activities must be maintained in the mar-

TABLE 2

Sequence Approach to Overhead Control

1. Long-range and short-range planning:
 - a) Establishment of overall objectives and targets
 - b) Development of detailed programs
2. Organizational adjustments to goals and plans.
3. Establishment of departmental standards of performance to match programs.
4. Development of *rigid* budgets to be adjusted quarterly for each sub-unit.
5. Reporting on the basis of specific responsibility, controlling *ratios* or proportional spending in relation to results, as well as actual expenditures and actual results in relation to targets and original programs.

keting area if the company is to have worthwhile sales results.

Accountants can play a major role in providing imaginative overhead control. The chart of accounts and all other control procedures should be revitalized continually in the light of changing management needs, and changing corporate objectives and programs. The availability of new systems and procedures and of new and very rapid computing devices also provides an ideal opportunity for the dynamic re-examination of overhead control systems and overhead accounting systems to achieve maximum effectiveness in any corporation.

Returning to table 2 we find that at the beginning of any overhead control system must be the establishment of corporate objectives and targets including profit targets and revenue targets by product groups and by end-use markets. These programs are then translated into financial terms. Overhead cost commitments inherent in the approved programs can then be developed for budgetary, cash flow and other control purposes.

Since the *raison d'être* of an organization is to achieve corporate objectives, an organizational review aimed at adapting the organization, if necessary, to changing corporate objectives and changing corporate programs is an important step. Thus, at point three we must adapt our overhead control system to organization changes and to the new plans, programs and objectives of the corporation.

The fourth point is the development of rigid budgets to be adjusted quarterly for each sub-unit in the organization. Rigid budgets (to be ad-

justed quarterly) are suggested to emphasize that from a management point of view varying the overhead cost items directly with manufacturing activity is usually unwise. Must not the order procurement or sales activity precede the manufacturing activity? Must not the sales dollar be imaginatively spent before we ever achieve manufacturing activity? Therefore the establishment of rigid budgets to match corporate programs is suggested. These budgets can then be reviewed in the light of new facts and circumstances on some regular basis. Four times a year seems adequate in most instances although perhaps not in all instances. What is suggested here is not a drastic change from some of the concepts of flexible budgets. Rather the whole contention of this article is that any management program must be carried out without major changes for a minimum period of time in order to make certain that the program has a chance to succeed. If this is true, then the costs implicit in such a program must be incurred without change for that period. Hence the rigid budget is recommended until the first review of the program comes up, and ample time has been allowed to properly evaluate the actual performance with the anticipated performance. Only at this point can the budget become temporarily flexible to allow for adjustments in the light of experience. As soon as these adjustments have been made, the budget again becomes rigid in order to allow the adjustments appropriate time to produce the desired result.

The other item is the reporting of actual results in relationship to targets, and actual expenditures in relationship to programs.

Indeed, under the sequence control program of table 2, a management may well penalize an executive as hard if not harder for failing to carry out a program which has been approved on schedule and for failure to spend funds as approved, as it would penalize an executive for spending money far in excess of authorized or budgeted expenditures.

While the author naturally subscribes to the views suggested above, there are certain inherent human problems in achieving the dynamic approach to overhead control suggested in this paper. No matter how well conceived the plan or program, when short-range reverses in business are evident, there is a most serious temptation triggered by fear to curtail expenses even if the long range

effect of this curtailing of expenses is a more serious reverse than any aspect of the short range downturn. Also in a rising market and with increasing volume, there again is a temptation to raise expenditures above optimum levels.

It is, of course, readily apparent that for any given business at any given point in time, considering both immediate and long range objectives, there is an optimum level of overhead expenditures and a balance of overhead elements which, if shrewdly utilized, will yield the optimum profit and growth result for the corporation.

The objective of overhead control now and in the future should be the determination and pursuit of this optimum mixture of overhead elements and their imaginative control individually, in balance and in total.

On the Reason for Year-End Adjustments

It should be remembered . . . that accounting must of necessity be a practical procedure, that ideals must often be sacrificed to expediency. In other words, the ideal situation would be for the accounts to exhibit at all times both the facts as they occur and the financial situation of the enterprise as it exists at any moment. It is more practical, however, to ignore the latter in the day-to-day bookkeeping procedure and make the necessary adjustments only periodically to show the true condition as it exists; that is, the situation need be shown exactly only at the times when the books are to be closed and the financial statements are to be prepared. The cost of record keeping is increased too much by an attempt to keep the accounts constantly up to date. Cost is always important; record keeping must not be a burden; it must be a help to business operations.

—Louis O. Foster in "Introduction to Accounting",
p. 210; R. D. Irwin, Chicago, 1941.

The Problems of Operating Ocean Freighters

G. MALCOLM MURRAY, C.A.

IN THESE DAYS of modern transportation methods, coupled with the development of the St. Lawrence Seaway, people are again becoming very much aware of ocean transportation and the many ships which carry goods to and from our Canadian shores. While some are content to see a ship and possibly wonder where she has come from, very few realize the complexities of the modern steamship world. In general, shipping today is divided into two classes: vessels engaged in liner service that operate on a scheduled route at given times and ships that travel anywhere around the world and carry any type of cargo.

Most matters in the shipping world today hinge around the type of charter which a ship owner can obtain for his vessel. With so many companies operating regular liner services between particular countries, it is very often necessary for them to take other ships on time charter to maintain the schedule of sailings which they have agreed upon. In fact, at the present time, many companies with services into Canadian ports are operating time-chartered tonnage because they do not have enough ships of their

own and, more particularly, because it is cheaper to operate by this method. Other owners may obtain charters of a different nature, such as a bare-boat charter or single-voyage charter. These charters are normally fixed through brokers. Each owner has his own broker who will work with other brokers in obtaining suitable employees for the vessel according to how long the owner wishes his ship to be employed and in what particular trade he is mainly interested.

Charter-Party Agreements

The agreement whereby ships carry their cargoes for hire is called a charter party of which there are three kinds. The charters are obtained through brokers who negotiate for the highest or best terms. The suitability of the terms may influence the owner as to which of the three types of charters will be undertaken.

1. Bare-boat charter

This is the leasing of the ship by the owners to the charterers for a fixed period of time at a stipulated rental per month. The charterers pay all operating expenses of the ship. This type of charter is quite popular where there is a surplus of freighters available for world trade. The owners under these circumstances are interested in the leasing of ships on a bare-boat basis as this relieves them of all the expenses. These charters may vary from two to five years.

2. Time charter

This is a contract where the owner leases the ship for a specified period of time at an agreed rate per month.

In this type of agreement the owner would be responsible for the crew and various minor expenses, with the charterer paying all stevedoring costs,

port dues, bunkers and any special charges incurred by the ship as a result of his operations.

A ship which is operating under a time charter sometimes runs into difficulties which may prevent the ship from operating, such as dry docking for repairs. Should the vessel go off hire for reasons of breakdown, etc., the owner must refund to the charterer a portion of the hire when the ship is not available and the owner is directly responsible for all expenses incurred by the ship during the hire period. It is normal practice, however, in most time charters to allow a fixed period per month for running repairs in addition to a normal allowance of two weeks per year for annual dry docking.

The long-term time charter is most popular with the owners in a falling freight market. Under normal conditions time charters may vary from three months to two years. At the present time, freight rates are very low because world trade has slackened and there is keen competition among ship owners to keep their ships operating.

3. Voyage charter

A voyage charter is a contract between the owner and a charterer wherein the owner contracts to take a cargo or cargoes from one port to another for an agreed sum of money. The owner in this case would normally pay all the expenses. The voyage charter is the most popular charter party for the owner at the time of a rising freight market. The ship is not under contract for a long period of time, usually not exceeding three months. In these circumstances, the owner can take advantage of the rising market.

The terms of a voyage charter usually provide for a certain number of days for loading and discharging cargo. If the cargo is loaded or discharged in less time than the terms of a charter party, the owners pay out a share of their saving of the ship's time and this is called "despatch". If the ship takes more time than agreed, the owners receive additional income called "demurrage". The rate of demurrage is usually double the rate of despatch.

Quite often charter parties are signed many months before the ship is available. The rates of charter hire may change between the date of signing the charter party and date the ship commences the charter. When there has been a substantial change in the freight rates the owners and charterers may negotiate for a change in the freight rate. If renegotiation fails, there may be a cancellation wherein one party pays the other a certain sum as compensation for the cancellation of the charter. Both sides are then free to negotiate at the current rates.

On a recent decision of the Exchequer Court (*Bedford Overseas Freighters Ltd. v. MNR*) it is allowable for tax purposes to deduct money paid out by the owners to cancel a charter party even though the cancellation permits the owners to undertake new charters at a higher freight rate.

The method of freight payment varies. Bare-boat and time charters are paid monthly and in advance. Voyage charters are paid usually 75 to 90% on loading of cargo with balance on completion of delivery of cargo. The terms of some voyage charters are 100% on loading and may not be re-

turnable to the charterer whether or not the cargo is lost enroute.

Accounting Problems

Accounting problems are created by the ships travelling around the world and are complicated by the currencies of the different countries which the ships visit.

For both time and voyage charters, accounting records are set up to maintain the revenues and expenses of each voyage for each ship. A subsidiary record is maintained to record the costs of each ship under the following headings: wages, bunkers, engine and deck stores, port dues and expenses including stevedoring, repairs to hull, deck and engine, provision and stewards' expenses, insurance, brokers and charterers' commissions, management fees and despatch and demurrage. All the above headings apply to voyage charters whereas only part of them apply to time charters.

A ship travelling the oceans may purchase provisions in Hong Kong or Australia; make advances to crews in India or Brazil; buy bunkers at Pulo Bukom in Italian Somaliland or Taku Bar in China; have repairs made in Germany or Italy or make some expenditure at any port of call. At all various ports of call funds are advanced to steamship agents who look after the needs of the captains and the ships. They send a statement of account to the owners or their representatives accounting for the advances made, returning any excess funds or requesting additional funds if required. Suez and Panama Canal fees are always handled by the ships' agents.

Receipted vouchers are completed

in the currencies of the country where disbursement was made. They are forwarded by the agent and they must be converted to Canadian currency for inclusion in the accounting records. A foreign exchange account is carried on the books to absorb the differences in exchange rates. At the balance sheet dates many advances may have been made to the agents at various ports for which the company has not received an accounting. Often two years or more may elapse before particulars of the disbursement of these advances are available. They must then be carried as outstanding receivables unless it is possible to make a reasonably accurate estimate of the actual expenses at the particular ports.

Normally, crews sign on and off their ship in their home country. The record of wages due to each seaman or crew member is maintained by the captain on the payroll record and is called a portage bill. The record shows rate of pay and actual pay for the period, deductions, allotments sent to next of kin, advances received at different ports of call, personal items drawn from captain's stores, overtime pay and any fines or forfeitures. This portage bill is not completed until the ship returns to her home port or some other port in her home country.

As previously mentioned, due to the ship going anywhere around the world she may not return to the home country for a long period; hence, the portage bill is not completed at any definite or specified time. When the ship is away over the fiscal year end of the company, an estimate must then be made of wages applicable for the operating period to be included in the financial statements.

Sometimes because of illness, deser-

tions, accidents or some other event crew members must be replaced at the port where the ship is calling. Quite often the people replacing the crew may be from India or China. When this happens, special food must be carried for them. In some cases live animals must be taken on board which these crew members kill themselves. The Lascars from India and the Chinese must be returned home at the termination of their employment period. Sometimes it is necessary to send them by air, and provision for this eventuality should be made in the financial statements. Where actual air transport expense occurs, it is an allowable income tax deduction, but estimated provision is not.

Practically all the expenses relating to deck and engine stores, bunkers, port dues including stevedoring, provisions and stewards' supplies and despatch are paid by the owner's agents, and usually there are no particular year-end problems except in relation to the outstanding agents' advances referred to above.

Insurance and Commissions

Insurance coverage is carried on the ship and the payment of the premium may vary from an annual to semi-annual to quarter annual payments. Special insurance for certain areas where the risk is considered greater must be carried and care must be taken to ensure any liability is included. This special insurance expense will apply to both time and voyage charters but in the case of time charters, the expense is usually recovered from the charterers.

The ships provide their own coverage on their crews for medical and

hospital. The different ship-owning companies form a club and make a call on the owners for a certain amount a year depending on tonnage and number of ships. All claims are forwarded to the club. At the end of each year an accounting is made, and the deficit or net cost of claims is shared by the ship-owning companies. These accounts may be three years late being rendered, and for the financial statements an estimate must be made of the outstanding liability.

Brokers' and charterers' commissions present no accounting problem, but the amount or rate may vary on the different charters. This is a commission paid on the freight and can vary from a total of 3½% to 7% depending on the number of brokers and charters concerned. A Canadian company will have managers in England and sometimes in the United States. These managers charge a management fee of so much per month per ship and may also receive a charterer's commission on the freight which each ship earns. This will depend on whether the foreign managers participate in the negotiation of the charter parties.

Normal repairs include an annual survey which is required by the underwriters, and a special survey is necessary every four years. The repairs completed on a ship after a voyage and before delivery to a new owner when sold requires close scrutiny, otherwise the officials of the Income Tax Department consider it a deduction only from the sale price of the ship.

The accounting treatment of voyage charters differs from that of time charters. The revenue and expenses of a time charter are accrued and record-

ed for tax purposes on a daily basis. The revenue and expenses of a voyage charter are recorded or included in income only on the completion of the voyage.

No great problem exists in determining the revenue and expenses applicable to the fiscal period where a time charter is completed shortly after the year end of the company. Where a time charter is not completed for many months after the year end, the applicable revenue and expenses are determined on the basis of the average daily costs of previous time charters.

Sea Damage

The cruel sea is often a challenge to ships. They encounter storms, hurricanes, uncharted shoals and other ships. When any of these occur, they may suffer damage the extent of which varies from complete loss to damaged bows or lost propeller, and may create some special accounting problem.

The extent of the damage must be surveyed and estimates obtained of the cost of repairs in order that a claim be made against the insurance underwriters. As they may occur anywhere in the world, surveyors are appointed by the owners if one of their own is not available in that country. The extent of damage and the cost of repairs is then negotiated with the insurance underwriter. This procedure takes much time and quite often three to five years may pass before a claim is settled. The problem for the accountant at the year end, when repairs have been completed, is to determine or estimate what amount should be provided as recoverable.

At the same time it is usual for the

insurance underwriters to have a representative of their own to safeguard their interests. A ship owning company usually has on its staff a shore captain and chief engineer, whose duties are to investigate the ship's damages and oversee the repair work at the shipyards. These men have had many years sea time.

Should the ship run aground, it is sometimes feasible to refloat it in order to discharge the cargo and to determine extent of damage. The expenses of doing this are very high and are claimed against the underwriters. Not all of these expenses may be paid by the insurance company. Those not recovered are then deducted from income of the company.

In some instances, after refloating, the ship is not worth repairing and may be declared a constructive total loss. In this case the insurance companies pay the owners the full coverage and take the hull which is usually sold for scrap. The underwriters may settle for something less than full coverage and permit the owners to retain the hull. The underwriters may argue that the ship can be repaired for less than the insurance coverage and negotiate for a settlement on that basis. The owners may not agree, but a settlement is made which, as far as the owners are concerned, is the proceeds from the disposition or loss of the ship.

Under some types of contracts the freight revenue is insured to protect the owners if freight has to be returned for non-delivery. When the cargo is not at the owner's risk and both ship and cargo are lost, then the freight insurance recovery is considered an additional recovery on the hull.

Depreciation Allowance

Depreciation is usually recorded on the books of account at the rates of capital cost allowance allowable for income tax purposes. The normal rate of depreciation was 6% up to 1948. For the ships purchased from the Canadian government, double depreciation was also allowed which was another 6%. For companies whose income was sufficient in the first year of operation, a special 13% allowance was permitted also. When the depreciation rates were changed in 1949, the normal rate became 15% on the residual value whereas the double remained the same at 6% on cost up to a cumulative maximum of 50% of cost.

In order to claim any capital expenditure which may have been made up to 1948, and on which double depreciation was desired to be claimed, the Income Tax Act required the filing of a capital expenditure depreciation claim. For a period after 1949 there was no provision for claiming extra depreciation, but later the Act was changed to give an impetus to Canadians to build new ships or improve old ones by now permitting capital cost allowance of up to 1/3 of cost if profits available. Proper application must be made, however, in order to have this privilege.

Canadian Shipbuilding

During World War II, Canada built a considerable number of ocean-going vessels of the Park and Fort type and, in the period from 1945 to 1950, the government sold these vessels to different Canadian companies. The sale price of the ships sold in 1950 was between \$300,000 and \$400,000. Most of the ships were converted immediately from coal-burning to oil-burning. The cost of that conver-

sion was between \$40,000 and \$50,000. The value of the ships on the open market has substantially risen until this year. The Canadian Maritime Commission has to approve the sale price of any ships which were purchased from the Government.

The original buyers were restricted if the ships were sold other than to another Canadian company. They were required to use the proceeds for buying or building new Canadian ships or were penalized. The funds from sale are placed in escrow in a bank in Ottawa where all withdrawals have to be approved by the Canadian Maritime Commission. The owner of the funds in escrow could sell the funds to another Canadian company if it did not wish to acquire new ships. The owner of the funds usually had to suffer an 18% discount or loss on sale which, in most cases, would be less than any penalty. If the funds from the sale of a ship were used to build a new ship in Canada, the depreciation on the ships sold would not be recaptured. It is not important whether the company which sells the ship builds the new one in Canadian yards but only that the proceeds of sale are used for new Canadian building.

The Canadian ocean-going fleet has been decreasing for the last ten years. The prime reason for this is that the cost of operating Canadian ships is very high due mostly to crew's wages, insurance and the cost of ships themselves.

While it is a great pity that these ships have been transferred to other flags, it is to be hoped that with the development of Canadian resources and trade something may be worked out soon whereby Canada once again possesses a deep-sea merchant fleet.

OPERATION OF MUTUAL FUNDS

WILLIAM F. MacLENNAN, C.A.

IN THE GREAT growth of business activity in Canada during the past 15 years, few forms of business enterprise have surpassed the mutual fund in growth, both in assets employed and number of shareholders. The mutual fund is not new, except in name. This corporate means by which a group of persons pool some of their resources for mutual investment in the securities of a considerable number of other companies was known as an "investment trust" for many years. These trusts were flourishing in Scotland at the turn of the century when the investment policies to be decided were likely Australian wool v. Indian hemp rather than the current preferred v. common stock.

Objects of Mutual Funds

Mutual funds are, for the most part, incorporated companies, operated by a board of directors elected by the shareholders. Capital is raised by sale of treasury shares and invested in the shares or obligations of other companies or governmental bodies. The objects of the company are recited in its letters patent, but broadly speaking are to (1) provide a reasonable rate of return on the capital invested in the company, (2) to protect the

value of the investments and (3) to achieve capital appreciation.

The numerous mutual funds existing in Canada today are each designed to satisfy individual requirements. Some are intended primarily to provide safe income; some stress capital appreciation and do not pay dividends; others provide an opportunity for their shareholders to participate in American business by investing almost solely in U.S. securities. All have the common objective of the profitable investment of the shareholders' capital.

The mutual fund is accepted widely because the average investor does not have sufficient capital to spread his risks over a broad variety of investments nor the time and opportunity to study the merits of them. Through the medium of such a fund, these difficulties are largely overcome since his capital is joined with that of others like himself and invested for him by experts. To the basic principle of diversification of investment by expert management, there have been added features that appeal to individual requirements. One fund provides the opportunity to accumulate capital by permitting monthly payments for subscriptions to capital

stock or units. Another retains the shareholders' dividends and automatically issues further shares as far as the funds so held permit. Some companies keep the shareholders' dividends and contract for regular withdrawals even though such withdrawals are in part a return of capital. Others allow participants to take advantage of income tax deferment through annual payments into a registered retirement savings plan by withholding distribution of income and converting the accumulated savings into an annuity before the holder reaches age 71.

Open and Closed Ends

The capital structure of investment or mutual fund companies differs principally in only one manner. Some have two classes of capital stock, one of which is redeemable at the option of the shareholder only (known as the open-end fund), and others do not have a class of capital stock that is redeemable (known as the closed-end fund). Shares of open-end mutual funds are seldom traded on stock exchanges where prices are influenced by supply and demand and do not necessarily reflect true values. In order that shareholders may readily convert their investment into cash, open-end funds sell to the general public shares that are redeemable at a price equivalent to the pro rata equity of each outstanding share in the net asset value of the company. Shares of the second class, non-redeemable, are issued in only a nominal amount, their purpose being to preclude the necessity of winding up the company due to all shareholders requesting redemption. The closed-end type of mutual fund, being less flexible, has not been popular, and

few companies of this type have been formed in Canada in the last 20 years. Their shares trade on stock exchanges on a brokerage basis. The open-end funds determine the issue and redemption price of their shares at regular intervals (daily, weekly or monthly) by computing the market value of their assets at the appropriate time, deducting from the aggregate thereof the sum of all liabilities and dividing the resultant net asset value by the number of shares then outstanding. The result is the "break-up" value of the shares. The purchaser pays the "break-up" value per share plus, in most instances, a commission to an agent. The company pays the "break-up" value per share on redemption.

The auditor will find an engagement on an open-end mutual fund of more than average interest because, apart from the normal checks for arithmetical accuracy and the balancing of accounting records, most phases of the examination must be carried out in the light of some section of the company's letters patent and by-laws, some contractual obligation the company has entered on, or some decision of the board of directors.

Effect of Letters Patent

Extensive extracts from, or even complete copies of, certain sections of the letters patent and by-laws will be required for ready reference during an examination.

The issue and redemption price of treasury stock and the proportions thereof to be credited or charged to specifically named accounts must be studied. Mutual funds incorporated under the Canada Companies Act usually are organized with capital

stock of a considerably lower par value than the intended issuing price of the stock, the excess of the issue price over par value being carried to a "reserve for redemptions" or "capital surplus account", and the redemption feature of the one class of stock will be limited to the availability of funds in the "reserve for redemptions". Thus, shares may be redeemed without invoking those sections of the Companies Act that would necessitate the creation of capital surplus out of net profits and the obtaining of supplementary letters patent to restore the capital surplus to earned surplus. The directors may deem it expedient to set aside some portion of the issue price for other purposes such as a reserve for organization expenses, and adherence to such resolutions will have to be watched. Reference will be found here as to how and when the net asset value per share is to be determined; the assets to be included will be enumerated, the method of valuation stated and the liabilities to be deducted set forth.

Mutual funds are organized to provide a means of participating in the numerous types of investments available to the public and to varying extents in each type. Consequently, the auditor must be familiar with the restrictions placed on the investment policy of each company. One such restriction may be that not more than 10% of the company's capital may be placed in the stocks or evidences of debt of any one issuer, or that investment may be made in Canadian companies only or companies that have paid dividends for a stated number of years, or that securities may not be purchased on margin or sold short.

There will be found, in the letters

patent or by-laws, sections defining the types of income that are to be available for dividends, if any, and the extent to which the stated income may be disbursed annually. The receipt of stock dividends and rights to subscribe to the shares of investments held may or may not be designated as income.

The stated policy of the company in accounting for its investments must be carefully noted as it will affect every investment purchase and sale. The purchase of investments will be recorded in the investment account at purchase cost, but when disposals occur, the individualities of the mutual fund come into play, particularly if only a portion of the holding of one security is sold. One common procedure is to average the purchase cost of the investment in each security, crediting against it the proceeds of sale and adjusting the investment account for the profit or loss on the individual security only when entirely disposed of. However, if the procedure results in a credit balance while some of the investment is still held, the book value is adjusted to a nominal debit balance for record purposes. Another practice is to clear from investment account the excess or deficiency of the proceeds of sale over or under the average book value before the transaction. Yet other mutual funds transfer profits or losses on sales on a first-in, first-out basis. The net realized appreciation on investments may be utilized in differing ways. It may be re-invested and carried forward on the balance sheet as part of the shareholders' equity or made available to the shareholders by way of cash dividends and/or the subscription price for further participation in the fund.

Expenses of Fund

The greater part of the mutual fund's operating expenses is fees to a custodian of securities and to an investment manager or to directors. It is common practice to employ a trust company or bank as custodian of the company's securities, and an agreement is entered into setting forth the custodian's duties and remuneration which is usually computed as a percentage of the average market value of investments held during a year, plus a fixed charge for each delivery or receipt of securities. The investing of the company's funds will be entrusted to a professional investment managing organization or be a direct responsibility of the board of directors. In the former case, a fee is paid usually based on the market value of investments and directors' fees will be nominal. In the latter, the directors' fees may be more substantial.

Most mutual funds qualify under section 69 of the Income Tax Act as an "investment company" and as such are subject to tax at 18% of taxable income. Expenses, however, must be prorated between taxable and non-taxable income. Companies that qualify under section 70 of the Income Tax Act as non-resident-owned investment corporations have certain attractive tax features for residents of the United States, particularly when earnings are not paid out but reinvested with consequent enhanced share value. The United States resident will pay a capital gains tax on

redemption of shares, which tax is computed at a much lower rate than the tax on income.

Due to the continuous process of issuing capital stock, a prospectus will have to be filed annually in those jurisdictions in which the shares are offered for sale. Thus, the annual statements and auditor's reports should be prepared so as to conform to the requirements of both the Companies Act and the Securities Act.

Conclusion

Mutual funds will most likely continue to expand in Canada as long as there are great numbers of people with at least modest sums of money over and above living requirements who want a relatively safe investment which provides a reasonable return and an opportunity to participate in the economic growth of the country. As an investment medium, the mutual fund is seldom used for a short-term hold. Its investment policy usually is to take advantage of trends in business activity that may take some years to run a full cycle, notwithstanding some spectacular results that have been achieved in the last three or four years. Caution must be exercised in investing in mutual funds as in any other company because they can become a dumping ground for the surplus securities of promoters, or ineffective through the lack of ability or attention on the part of those responsible for investing company funds.

Accounting Research

DIRECT COSTING

Over the past few years there has been increasing discussion of the method of inventory valuation known as "direct costing". These discussions, although they have not as yet been very successful in obtaining general acceptance of the method, have been very enlightening for a number of reasons. The method is primarily advocated as an aid to management rather than to shareholders or investors, and thus the discussions provide a useful reminder to accountants of the fact that the needs of management are not always adequately served by financial statements prepared primarily for shareholders.

Like all inventory valuation methods, direct costing is concerned with the allocation of costs between the current period and future periods. As the name implies, direct costing attempts to resolve this question by allocating to inventories, and thus to the period in which the goods are sold, only those costs incurred as a *direct* consequence of producing goods. All other costs, including the costs of providing productive facilities, are considered to be period costs to be charged to expense in the period in which they are incurred.

Under this method, inventory values do not include any element of fixed overhead expense and are somewhat less than the conventional values. On the other hand, they do include more than those costs conventionally con-

sidered as "direct" in that all variable overhead items are included in addition to the costs of materials and labour.

The majority of the exponents of direct costing define it as a method of cost allocation in which all variable expenses are treated as product costs and all fixed expenses are treated as period costs. A small minority, however, objects to this definition on the grounds that it tends to obscure the emphasis on the *direct* relationship of costs with product which is the basic characteristic of the method. Those who hold this latter view would classify costs so as to include in inventory only those items which can be readily and logically identified with specific products. Those items which cannot be so identified would be treated as period costs even though they may vary directly with the volume of production. While this difference in the basic definition of direct costing does tend to confuse some of the argument on the subject, the principal arguments for or against the subject are not too seriously affected. Moreover, since most advocates of direct costing favour the inclusion of all variable costs in inventories and since it can be argued that those who do not are actually proposing something other than the usually accepted procedure, the majority definition will be accepted in the discussion which follows.

Most writers on direct costing have adopted the term "absorption costing"

to distinguish the conventional method of including all overheads in inventory from the new technique which they are advocating. Because of its convenience, this usage will be observed in this article.

The Case for Direct Costing

The proponents of the direct costing method argue that sound management requires a knowledge of the marginal cost of additional production, that is, of the extra cost that will be incurred in the production of one more unit of product. They further point out that under conventional absorption cost techniques, the behaviour of unit costs under changing volume conditions is so erratic that management cannot make intelligent price/volume decisions on such figures alone. While admitting that supplementary calculations of marginal or variable cost would provide the necessary information, they argue that such calculations would involve unnecessary duplication and that the proper solution is the development of a cost system which will provide such information regularly as a matter of routine. The alleged ability of the direct costing method to provide cost figures which approximate marginal costs and which avoid the confusion resulting from the inclusion of fixed overhead elements in costs is usually presented as the principal advantage of the method.

Most advocates of direct costing, however, go further than this and argue that the provision of financial statements which are also free of what they regard as the confusion and lack of realism produced by the practice of including fixed costs in inventory is an additional major advantage

of their procedure. In explaining this argument, they point out that the inclusion of fixed overheads in inventories conceals the true results of operations under certain circumstances by permitting the transfer of a portion of the fixed charges between accounting periods and by allowing profits to be affected by fluctuations in the volume of production.

The basis of this claim that conventional results are misleading is best illustrated by a simple example. The accompanying tables have, accordingly, been prepared to illustrate the effect on the operations of a hypothetical company over a four-year period of recording results on the direct costing principle rather than the conventional absorption costing basis. It is assumed in this greatly simplified illustration that the company in question manufactures a single product which throughout the period under review is sold for two dollars per unit. Variable costs of manufacture are one dollar per unit and fixed overheads amount to \$500,000 annually. It is further assumed that the absorption cost method used does not involve the use of pre-determined or standard overhead absorption rates so that the whole of each year's overhead is allocated to the actual production of the year. General and administrative expenses of \$400,000 per year are excluded from manufacturing costs.

In this simplified example the arguments of the direct costing advocates seem to be borne out to some extent. Not only would a management with the direct cost figures see clearly that variable costs had been constant over the period at \$1.00 per unit, they would also see that fixed overhead costs had remained constant and that

A MANUFACTURING COMPANY LIMITED

COMPARATIVE INCOME STATEMENT

	Year 1 (units)	Year 2 (units)	Year 3 (units)	Year 4 (units)
Production data				
Inventory, January 1	300,000	800,000	800,000	300,000
Production	2,000,000	2,000,000	1,500,000	2,500,000
	<u>2,300,000</u>	<u>2,800,000</u>	<u>2,300,000</u>	<u>2,800,000</u>
Sales	1,500,000	2,000,000	2,000,000	1,500,000
	<u>1,500,000</u>	<u>2,000,000</u>	<u>2,000,000</u>	<u>1,500,000</u>
Inventory, December 31	800,000	800,000	300,000	1,300,000
	<u>800,000</u>	<u>800,000</u>	<u>300,000</u>	<u>1,300,000</u>
Income under absorption costing				
Sales	\$3,000,000	\$4,000,000	\$4,000,000	\$3,000,000
	<u>\$3,000,000</u>	<u>\$4,000,000</u>	<u>\$4,000,000</u>	<u>\$3,000,000</u>
Cost of goods sold				
Variable costs	\$1,500,000	\$2,000,000	\$2,000,000	\$1,500,000
Overhead absorbed (see below)	375,000	500,000	610,000	330,000
	<u>\$1,875,000</u>	<u>\$2,500,000</u>	<u>\$2,610,000</u>	<u>\$1,830,000</u>
Gross profit	\$1,125,000	\$1,500,000	\$1,390,000	\$1,170,000
General and administrative expense ..	400,000	400,000	400,000	400,000
	<u>400,000</u>	<u>400,000</u>	<u>400,000</u>	<u>400,000</u>
Net profit	\$ 725,000	\$1,100,000	\$ 990,000	\$ 770,000
	<u>\$ 725,000</u>	<u>\$1,100,000</u>	<u>\$ 990,000</u>	<u>\$ 770,000</u>
Income under direct costing				
Sales	\$3,000,000	\$4,000,000	\$4,000,000	\$3,000,000
Cost of goods sold (all variable)	1,500,000	2,000,000	2,000,000	1,500,000
	<u>1,500,000</u>	<u>2,000,000</u>	<u>2,000,000</u>	<u>1,500,000</u>
Gross profit	\$1,500,000	\$2,000,000	\$2,000,000	\$1,500,000
	<u>\$1,500,000</u>	<u>\$2,000,000</u>	<u>\$2,000,000</u>	<u>\$1,500,000</u>
Fixed manufacturing overhead	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000
Administrative expenses	400,000	400,000	400,000	400,000
	<u>\$ 900,000</u>	<u>\$ 900,000</u>	<u>\$ 900,000</u>	<u>\$ 900,000</u>
Net profit	\$ 600,000	\$1,100,000	\$1,100,000	\$ 600,000
	<u>\$ 600,000</u>	<u>\$1,100,000</u>	<u>\$1,100,000</u>	<u>\$ 600,000</u>
Calculation of overhead absorbed in cost of sales				
Overhead portion of opening inventory \$ 75,000	\$ 75,000	\$ 200,000	\$ 200,000	\$ 90,000
Fixed manufacturing overhead	500,000	500,000	500,000	500,000
	<u>\$ 575,000</u>	<u>\$ 700,000</u>	<u>\$ 700,000</u>	<u>\$ 590,000</u>
Overhead portion of closing inventory (FIFO)	200,000	200,000	90,000	260,000
	<u>200,000</u>	<u>200,000</u>	<u>90,000</u>	<u>260,000</u>
Overhead absorbed in cost of goods sold	\$ 375,000	\$ 500,000	\$ 610,000	\$ 330,000
	<u>\$ 375,000</u>	<u>\$ 500,000</u>	<u>\$ 610,000</u>	<u>\$ 330,000</u>
Portion of fixed overhead absorbed in each unit of production	\$0.25	\$0.25	\$0.30	\$0.20
	<u>\$0.25</u>	<u>\$0.25</u>	<u>\$0.30</u>	<u>\$0.20</u>

fluctuations in sales affected net profit directly. They would not be confused by the apparent fluctuation in unit cost of production from \$1.25 to \$1.30 and \$1.20. The proponents of direct costing would also point out that the absorption costing method would make the poor results of years 1 and 4 appear somewhat better than they really are by postponing that portion of the fixed costs which is attributed to the increase in inventory. Conversely, the direct cost results do not reflect the decline in year 3 which the absorption costing method reflects as a result of the recognition in that year of some of the fixed costs incurred in the prior year.

Direct costing, because it avoids such allegedly misleading distortions of income, is held to be more realistic and thus of more value not only to management but also to shareholders, investors and others legitimately interested in the result of operations. The supporters of this claim point out that it is the excess of revenues over currently controllable costs that measures management's current efficiency, and that financial statements which show to what extent current operations are covering fixed costs are therefore more useful than those in which current results are confused by the effects of prior years' decisions as to the investment in plant and other fixed costs. The necessity for being able to understand and to demonstrate clearly the relationship between variable and fixed costs in cases of wage disputes and other arguments involving ability to pay is also emphasized by some writers.

As is appropriate in any discussion on accounting principles, the argument of increased usefulness to management as well as to the other users

of financial statements is considered to be the major justification for the adoption of the new technique. There are, however, some other advantages which are sometimes mentioned to strengthen the case for direct costing. These advantages include:

1. Greater simplicity in that direct costing eliminates the difficult and time consuming task of allocating fixed overheads to departments, product lines and ultimately to units of product.
2. Greater ease in control of operations by budgetary and similar means as a result of the ability to classify costs by responsibility rather than having to confuse operating costs by the inclusion of fixed cost elements beyond the control of the persons responsible for the operation.
3. More logical results as a result of the elimination of the arbitrary allocations necessary with absorption costing.
4. Better comparison and control of strictly time charges which can be shown and compared separately rather than being buried in product cost.

The Case against Direct Costing

Few of the opponents of direct costing deny the necessity of providing management with accurate information on marginal costs. They all agree that intelligent decisions on prices and volume require a knowledge of the effect of changes in volume on unit costs and that the unquestioning use of absorption cost as a basis for such decisions can be dangerous. They also point out, however, that the marginal approach to such decisions is a short term approach and

that in the long run a company must obtain in revenue enough to cover both fixed and variable costs if it is to survive. The use of variable costs as a basis of pricing can, as a result, also be dangerous. While it can be profitable under some circumstances to use idle capacity to fill an order at a price which provides only a small margin over variable cost, this practice must be followed with considerable care and confined to cases where the customer is isolated by size or location from the normal channels of distribution. Failure to ensure that special-price customers are isolated from the usual market may easily cause the apparent extra profit to be offset by later losses of regular sales or the complete disruption of the established price pattern.

A further objection to direct costing arises from the fact that direct costs are not, in most cases, marginal costs so that even in those cases in which knowledge of marginal costs would be appropriate the method does not provide the needed information. Direct costs, that is variable costs, are not true marginal costs not only because they seldom include selling expenses and other costs incidental to the delivery of merchandise but also because they are average costs of all production and do not, as a result, normally reflect the actual extra cost of producing the final item. A further reason given for not accepting the results of direct costing as the sole source of management information is that the costs determined by this method, like the costs determined by more conventional methods, relate to the experience of the past whereas the figures needed for business decisions are projections of future costs. It is argued in this connection that if

the future costs have to be calculated or estimated in any case the alleged time saving in direct costing will not be fully realized.

To the argument that the charging of fixed costs to the current period avoids the misrepresentation which occurs when such costs are transferred between periods as part of inventory costs, the defenders of the conventional method reply that this procedure is frequently a correct representation of the facts. It is argued that when goods are legitimately and wisely produced for future sale there is nothing incorrect or unreasonable in carrying forward to the year of sale the cost of providing the facilities used to produce them. It is, in fact, argued with some justice that it is the system which reflects a loss on manufacturing operations in a period when the facilities are fully employed in producing saleable goods that is unrealistic in these circumstances.

In addition to the theoretical arguments aimed against the alleged benefits which direct costing would confer on management and other users of financial statements, there are a number of practical objections sometimes adduced. Perhaps the most important of these is the denial of the direct costing claim to greater ease of computation. It is pointed out that the assumption on which this claim is made, namely, that all costs can be readily classified as fixed or variable, is in most cases unrealistic. In actual practice, of course, a large proportion of the expenses of any enterprise fall somewhere between these two extremes, being either variable in some way not directly related to volume or else varying in steps or jumps rather than in an even regular manner. Obviously, if this is the case, the switch

to direct costing will not eliminate the need for arbitrary and to some extent illogical allocations of cost.

A further objection which is really an expansion of the above is based on the argument that the relative variability of expenses is largely a matter of time. In the long run all overhead expenses are variable whereas in a very short period most of them will be fixed. In a sense this objection is more theoretical than practical. For day-to-day decisions it is usually possible to make distinctions on a fairly reasonable basis.

This situation does raise another question, however, that may be more serious. One of the implicit assumptions underlying the direct costing theory is the idea that fixed costs are basically different from variable costs. Fixed costs are said to be incurred on a time basis whereas variable costs depend on day-to-day decisions as to the level of production. When the items usually included in fixed costs are examined, however, this distinction does not seem to be universally valid. For example, one of the principal fixed charges is usually depreciation and a careful consideration of the nature of depreciation reveals that it is actually to a large extent, at least in the case of machinery, a variable cost which is only treated on a time basis for convenience. In those enterprises which use a unit of production basis for calculating depreciation it becomes a variable cost. It seems possible in many cases that the solution to the problem of fixed cost may be a more careful analysis of their relation to production rather than an arbitrary exclusion from production costs.

Conclusion

Despite the validity of some arguments advanced in favour of direct costing, the method cannot be said to have become generally accepted as it has actually been used by only a small minority of enterprises even in the United States. This lack of acceptance may be due only to the traditional conservatism of accountants, but it seems probable that it is also due to the realization that the proposed method is not the final answer to all problems of inventory valuation.

The efforts of the advocates of the method cannot be considered wasted, however, even if they never succeed in getting their proposals recognized as valid accounting procedures. The questions they have raised regarding the possible distortions which may result from the postponement of fixed costs in inventory may not, for example, be valid in all cases. However, by forcing accountants to think about the problem, they may have encouraged the adoption of some techniques for separating that portion of fixed cost which can legitimately be regarded as part of the cost of goods sold in future periods from that portion which represents the cost of idle capacity and should thus be charged to the period in which it is incurred. Similarly, by drawing attention to the need of management for marginal cost information they may have encouraged the introduction of more effective cost analysis methods. They have without doubt encouraged some serious reconsideration of some of the basic assumptions of conventional accounting and this, in itself, is a useful service to perform.

Administrative Accounting

MATHEMATICS AND ACCOUNTING

It is almost a truism that accountants possess a distaste for, or at least an innocence of, mathematics. Historically, there has perhaps been a basis for this attitude. Accounting has been a product of practical business requirements. There existed a need to control and make sense out of practical business details so that businessmen could have a picture of where they had been and where they were probably going. Accounting has been developed as a tool specifically to meet this need.

Mathematics, on the other hand, has been developed not so much to meet specific needs but more by men withdrawn from practical affairs in pursuit of abstract truth. The immediate usefulness of such truth was not a matter of importance. The backgrounds of accountants and mathematicians have therefore in the past been very far apart.

The approach of scientists, on the other hand, has always been much closer to that of mathematicians, and there has been a tremendous development in modern times in the application of mathematics to the solution of scientific problems. Modern theoretical science would never have reached the present state of development without this assistance of mathematics. Many solutions have been suggested to scientific problems by mathematicians long before they could be checked by physical experiment.

As for applied science there would be no such thing as engineering without mathematics.

It is remarkable, nonetheless, that mathematics has as yet made such little headway in the field of accounting. Both disciplines are essentially involved in the synthesis of details to arrive at a meaningful whole. The accountant has traditionally relied on arithmetic, an elementary form of mathematics. It is almost obvious that there must be many problems in the field of business and accounting which could be solved or at least reduced to more manageable proportions by mathematical techniques more advanced than the arithmetic taught to a grade eight pupil.

It would appear that unless accountants are at least aware of the possibilities in this field they will be leaving a vacuum for others to fill. There are already a number of examples of "operations research" being conducted in traditionally accounting fields by non-accountants. Accountants will be forced to realize that these essentially mathematical techniques perhaps have something of value to offer. To capitalize on their opportunities or even to maintain their position in many fields, accountants must be able at least to recognize those problems which may be susceptible to mathematical solution.

Inventory Control

The control of inventories has long

Here again, mathematics can be of assistance. Based on past experience adjusted for current and forecast data, it is possible to calculate the probability of a given level of safety stock being depleted. Conversely, we can determine the level of safety stock in addition to cycle stock needed to supply, say, 95% service to customers. If the degree of service must be higher, stocks must be increased; if service does not have to be this high, the stocks can be decreased. Mathematics can go a long way to reducing the problem of inventory control to one of management making a few conscious decisions.

Compound Interest

Historically, the one area of accounting where mathematics has obtained some acceptance has been that of compound interest. Without some elementary facility with mathematics it is rather difficult to grasp the principles of compound interest. Even here, however, the acceptance has been somewhat grudging and there has been little willingness to expand its application.

This has been strikingly illustrated by the reaction of accountants to the "discounted cash flow" system of appraising capital investments. Almost universally the technique has been described as new and often regarded with suspicion. The "discounted cash flow" system is at least as old as the Middle Ages. It is simply the principle of compound interest given an application slightly different from those with which it has usually been associated.

The present capital cost allowance system presents a number of problems some of which are complicated and time-consuming in terms of arith-

metic, but are readily amenable to solution with mathematics. An example is the present value of future income tax reductions.

Let the rate of capital cost allowance be r , e.g. .2 for 20%

Then annual capital cost allowance on an asset of \$1 will be as follows:

Yr. 1	Yr. 2	Yr. 3	Yr. 4	Yr. 5
r	$r(1-r)$	$r(1-r)^2$	$r(1-r)^3$	$r(1-r)^4$

From the principle of compound interest the present value of these capital costs allowances would be as follows:

Year	
1	$\frac{r}{1+i}$
2	$\frac{r(1-r)}{(1+i)^2}$
3	$\frac{r(1-r)^2}{(1+i)^3}$
4	$\frac{r(1-r)^3}{(1+i)^4}$
5	$\frac{r(1-r)^4}{(1+i)^5}$

This is a geometric series with the terms getting progressively and rapidly smaller. With algebra the long-term sum can be computed to be

$\frac{r}{i+r}$ where r = the rate of capital cost allowance and i = the rate of interest.

The present value of future tax reductions due to capital cost allowances is approximately one half of the above formula or $\frac{r}{2i + 2r}$

If much use is made of the discounted cash flow approach in capital investment problems this formula can eliminate a considerable amount of arithmetic calculations.

Another application is in compar-

ing the cost of depreciable with non-depreciable assets. The problem arises in the case of the purchase of shares or goodwill as opposed to fixed assets.

Let the cost of a non-depreciable asset be c .

Then the ratio of the effective cost of a non-depreciable to a depreciable asset, assuming the same purchase price for each, will be as follows:

$$\frac{c}{c - \frac{c}{2i + 2r}} = \frac{2i + 2r}{2i + r}$$

With a rate of capital cost allowance of 20% and an interest rate of 10%, the above ratio becomes equal to 6 or 1.5. In other words an expenditure of \$1 for a non-depreciable asset is equivalent (allowing for an interest factor of 10%) to \$1.50 for an asset depreciable at 20%. Conversely, \$1 expended for a depreciable asset is the same as 66-2/3c for a non-depreciable one.

A closely associated problem is the relative tax advantage of a continuing annual expenditure which can be charged to operations as opposed to one which must be capitalized. In the long run, the capital cost allowances on the expenditures in question will increase until they equal one year's expenditure. From this point on there will be no advantage tax wise in making the charge to operations as against capitalization. Before this point has been reached, however, there is a very appreciable tax advantage in being able to treat the expenditures as operating costs. This advantage can be calculated mathematically to be $\frac{1-r}{2r}$ x one year's expenditure, where r is the rate of cap-

ital cost allowance. With a capital cost allowance rate of 20%, the long-term tax advantage of being able to charge an annual expenditure to expenses instead of capitalizing it would be twice the annual expenditure, or perhaps a sizable sum indeed.

Another use for compound interest theory is in the matter of appraising the advantages or disadvantages of having an option to repurchase with a lease-back. Consider an annual payment of \$1 for n years. If there is no option the annual payments will be allowed for income taxes, and the present value of tax reductions because of this can be calculated to be as follows:

$$\frac{1}{2i} - \frac{1}{2i(1+i)^n}$$

where i = value of
money to company
concerned — say 10%
 n = no. of years
tax rate = 50%

For a long number of years the right hand member approaches zero and the value of the formula approaches $\frac{1}{2i}$ or 5 where the rate of interest or value of money is 10%.

If there is an option to repurchase all the payments become a base for capital cost allowances, i.e. the base will be n . The present value of tax reductions in this manner would be

$$\frac{n}{2i + 2r} \cdot \frac{r}{6}$$

If r is 5% and the rate of interest is 10% this fraction becomes $\frac{n}{6}$.

For an annual expenditure of \$1 we can therefore compare the number 5 with no option to $\frac{n}{6}$ with an option.

Obviously, if the number of years is more than 30, there is a tax advantage

in having an option. The above calculation takes no account of the amount of the option payment and the possible residual value of the asset at the end of the term. Having regard to these factors, the breakeven point might be considerably less than 30 years, but it could not be more than that length of time.

Other Uses

Statistical techniques have been used with advantage to determine the amount of checking needed in the case of freight bills and suppliers' invoices. The usual approach is to divide the invoices into groups according to value. It is then possible to balance the probability of discovering errors against the cost of checking for any particular group. Random sampling methods can be used periodically to determine whether any change should be made in the probability factor.

Curve fitting is another statistical device which has been made much more practicable with the advent of computers. It may be discovered, for

example, that maintenance costs vary with certain selected production data. This may be valuable for planning and control of costs.

The preceding examples are certainly not all or necessarily the most important instances of where mathematics is being applied in the realm of business and accounting. It seems probable that the invasion has just started. In particular the ease with which solutions can be obtained from modern computers will exert a continuing pressure to formulate problems in a mathematical form.

Accountants, of course, will not become mathematicians. A little knowledge of the subject, however, would diminish its mystery and facilitate its further usefulness. What is essential is that accountants be able and willing to recognize those situations which can be expressed in the form of a mathematical problem. They are in a strategic position to render this service and capitalize on this opportunity. Failure to do so will mean a failure to grow with modern requirements.

Tax Review

CAPITAL GAINS TAX

A capital gains tax has long been a controversial issue, and the arguments pro and con have frequently found their way into print. However, in view of a strong continuing interest in the subject, it is felt that attention should be drawn again to the principles and difficulties involved.

From arguments which have been advanced from time to time, it would appear that there are those who are in favour of such a tax quite apart from the revenue that it might bring in. A number of people have been upset by the fact that the gains earned through transactions in property have been subject to ordinary income tax, even though the profits have taken years in their realization. There is also a great deal of uncertainty as to whether a particular profit falls into taxable income or not. A tax upon capital gains, it is argued, would remove the uncertainty and provide for a more realistic rate of tax. The problem and its solution are not that simple.

Canada is fortunate to have the experience of the United States in this respect, as, without it, an objective appraisal would be almost impossible. It should be appreciated at the outset that a capital gains tax did not arise in the U.S. because it was felt that such gains should not escape the tax gatherer's net nor was it enacted to increase revenues. It arose simply

out of the different concept of "income" in the United States as contrasted to that in the United Kingdom.

"Income" in the United Kingdom

The economic concept of income in the United Kingdom was evolved in the 18th and 19th century based on farming which at that time comprised the major source of profit. Income therefore arose out of a purposeful activity such as farming, linked with a recurring element such as a crop and derived from a fixed and continuous source such as a farm affording a profit which could be separated from that fixed source without depleting it. Casual, sporadic and windfall gains derived either from the sale of land or property were excluded from the formal concept of income, being more the result of good luck than from the usual product of purposeful activity. It was concluded that these profits should be considered differently from ordinary income and treated as accretions to capital to be invested rather than expended.

The legal concept of income evolved out of the problems arising from the common practice by land owners of entailing their estates so that they would forever remain "in the family". The life tenant of such an estate was restricted to the enjoyment of the product of harvest arising out of the estate while he lived but under no circumstances could he encroach upon the corpus of the estate.

Following the formation of the London Stock Exchange in 1773, this concept of income was again reviewed by the courts to determine whether the profit realized on securities should be considered income or capital. In view of earlier definitions, the courts were logically estopped from treating trust estates composed of securities as monetary entities, and the corpus of such estates was concluded to be the corporate stock itself and not its value. In so doing the courts applied the same physical concept of capital to securities which they evolved in the administration of landed estates. The profit realized by the conversions of securities was regarded as a non-income accretion to capital in the same manner as an accretion was said to take place to a parcel of land when the water line receded. This concept was perhaps fostered also by the fact that the courts and the House of Lords were largely peopled by the landed gentry.

It follows that upon the inauguration of an income tax there was an established traditional concept of income and capital and this national levy excluded liability for tax upon capital accretions or gains.

"Income" in the United States

In the United States, on the other hand, absence of entailed land did not hinder land transactions as it had in England with the result that to the American economy, gains on the sale of property became a major source of income by which means early private fortunes were established. Later, highly increased development and exploitation produced tremendous increases in the market value of land, further accentuating the practice of buying and selling land as a primary

business, thus making possible the realization of capital gains to a degree never achieved in England.

In such an economy it was often difficult to distinguish between ordinary income and capital gains with the result that the term "income" came to be accepted as meaning the profits derived from selling real and personal estate and all other sources as well as the recurring yearly profits derived from purposeful activity. A man's "income", therefore, came to be regarded as his total monetary accretions rather than his recurring profits derived from his investments or labours.

Justice Pitney in the famous case of *Eisner v. Macomber* formally crystallized in American jurisprudence the concept that capital gains were a form of taxable income when he stated "for the present purpose we require only a clear definition of the term income . . . after examining the definition in common use . . . we find little to add to the succinct definition adopted in the two cases arising under the Corporation Act of 1909, 'income may be defined as a gain derived from capital, from labour or from both combined'; provided it be understood to include profit gained through the sale or conversion of capital assets". This concept was further ratified in the case of *Merchants' Loan & Trust Company v. Smietanka* where the U.S. Supreme Court held that the term "income" did include a gain from a single isolated transaction.

"Income" in Canada

The Canadian concept of income has followed English jurisprudence and theory. Canada recognizes capital gains and does not regard them as forming a part of "income". The American capital gains tax is a re-

duced tax upon income which unfortunately is called a capital gains tax. It is true that gains on similar transactions would be free in one country and taxed in the other, but this is the result of a different concept of the term "income" rather than a difference in the philosophy of taxation.

Tax Treatment in the U.S.

Since capital gains are included in taxable income in the United States, it is significant that the predominant legislation has been in the form of allowances and exemptions to alleviate the burden of this taxation. Congress shows all the signs of a split personality on this issue. Boldly repelling all frontal attacks it steadily undermines the tax on capital gains by constantly expanding the exclusion provisions. The first and most significant of them is the reduced rate of tax accorded by section 1201 of the Internal Revenue Code which provides for a maximum tax of 25%. Other sections provide for the exclusion or non-recognition of capital gains, a few of which are:

- (i) Complete liquidation of subsidiaries.
- (ii) Exchange of stock on reorganization.
- (iii) Involuntary conversions.
- (iv) Sale or exchange of personal residences.

Because capital gains or losses are defined, one might expect to find that U.S. courts infrequently hear a capital gains case. In truth, however, they hear more such cases per capita than in Canada. The reason for this is that the reduced rate of tax on such gains makes it advantageous to treat profits as a capital gain wherever possible. The position is exactly the same as in

Canada, only the prize is smaller. If capital gains were not taxed at lower rates there would be no advantage in appealing.

There is also the contention, which has very positive advocates, that the lengthy capital gain or loss provisions of the U.S. Internal Revenue Code alone are responsible for the largest portion of the complex tax laws, that the statutory definition has presented a difficult job of interpretation to the courts, and that eventually it may become necessary to resort to a transaction-by-transaction classification. This bleak prospect bears a strong resemblance to a conclusion favoured by a majority of the British Royal Commission on "The Taxation of Profits and Income", namely that each case must be decided in the light of relevant data and according to its own circumstances.

Furthermore, on investigating the return of this tax in the U.S. it is found to be less than one-half of one-percent of adjusted gross income of individual taxpayers before taking into account the cost of collection, let alone the initial cost which would arise on instituting such a tax, such as re-drafting the Act and increasing government personnel. On this point, the British Royal Commission states "A tentative estimate by the Board suggests an increase of staff in the Chief Inspector's Branch in the order of 500. To this must be added a formidable addition to the work of the Valuation Office and of that branch of the Estate Duty Office that is responsible for the valuation of unquoted shares."

Furthermore, the complexity of a capital gains tax imposes on the taxpayer a tremendous cost by keeping

professional advice at his elbow. In the United States everything has a tax base because it is from there that increases and decreases occur which determine whether a gain or loss has been encountered. The resultant accounting and legal work, tax arrangements and other details make normal business transactions quite complex.

Economic Effects

From an economic point of view the same set of reasons that are advanced in the U.S. for having a capital gains tax are the ones that are advanced in Canada for not having one, a rapidly developing economy in which it is possible to make these gains.

The Americans have taken the attitude that if it is possible to make such gains regularly they should be taxed. Canada has taken the attitude, on the other hand, that it is desirable for the development of the country that these opportunities be left open, and therefore it would not be advantageous to tax capital gains.

Canada, at present, is accelerating its growth by the use of foreign capital which is attracted, partially at least, by the prize of tax-free capital gains in return for the risks involved and the vital contribution to Canadian economic growth and prosperity. The imposition of a capital gains tax certainly would not increase the flow of foreign capital, and there is considerable speculation as to its results upon the risk funds available, quite apart from those from foreign sources. (Next month the findings of the U.K. Royal Commission on The Taxation of Profits and Income relating to capital gains will be reviewed and a summary of the arguments will be recapitulated.)

RECENT TAX CASES

Personal Corporation

Another decision of the Tax Appeal Board was upheld when the Exchequer Court ruled that a corporation controlled by an estate could not be considered a personal corporation. The company, prior to its 1955 taxation year, qualified in every respect as a personal corporation but, upon the death of its controlling shareholder, was administered and controlled by his executors. The court ruled that the term "individual" referred to in section 68(1) must be "a natural, living person capable of having a family." The court felt therefore that the estate must be "looked through" to determine the "individuals" for whom it was acting. As the beneficiaries were his brothers, sisters, nephews and nieces, none of whom would be in a position to control, it was ruled that the corporation was not controlled by an individual or by an individual and one or more members of his family. "Family" is defined in section 68(2) as "an individual's spouse, sons and daughters."

The court pointed out that its decision was not to be taken as a precedent that every personal corporation ceases to be such on the death of its controlling shareholder but that every case must be examined upon its own merits. It did, however, clarify the position of an estate or trust (the conduit pipe theory) in the particular circumstances but it is interesting to speculate how it would have ruled if the beneficiaries or their equity in the company were unknown. The court also ignored completely section 63(2) which states "A trust or estate shall, for the purposes of this Act . . . be deemed to be in respect of the trust

or estate property an individual . . ."
(*Settled Estates Ltd. v. M.N.R.*)

THE LAW

Registered pension plans

The "Blue Book" of the Department of National Revenue which was entitled "Statement of Principles and Rules Respecting Pension Plans for the purposes of The Income Tax Act" has now been extensively revised, as promised some years ago, and appears as Information Bulletin No. 14. While nothing startling has emerged from this revision, it is evident that the rules have been relaxed considerably and that there is more scope for tailoring registered pension plans to the express needs of the business. Some of the more important changes are as follows:

1. Investments of the pension fund are no longer restricted to those authorized by the Canadian and and British Insurance Companies Act. Pension funds may now invest in dividend-paying shares of the employer company but not more than 10% of its assets may consist of such securities. The fund may not invest in notes, bonds or similar obligations of the employer company or of its parent, subsidiary or associated companies.
2. Provision may now be made for "variable annuities" although it is suggested that many pension plans accomplished this by relating the pension to the employee's remuneration immediately before retirement.
3. Of interest to companies having foreign parents is the fact that plans instituted and operated outside of Canada will now be accepted for registration only in the most

unusual circumstances. If accepted, it will be necessary that it be underwritten by a Canadian insurer or that the funds applicable to Canadian employees be held in Canada by Canadian trustees.

4. "Discrimination" has been eliminated as a factor in the acceptance of pension plans and plans may now be established for separate groups. Also, pensions may now be related to service only instead of to service and earnings.
5. Pension plans may now be established for a particular industry by subscribing employers. This will enable small firms in an industry to institute joint pension plans and ought also to provide for more mobility of labour.

Uncollectible proceeds of disposition

In the August issue it was reported that a deduction from income would henceforth be allowed for proceeds from the sale of fixed assets that proved to be uncollectible. The deduction allowable was reported to be the lesser of the amount of the debt or the proceeds subject to recapture and if the property was sold at a loss nothing could be claimed. These statements were in error. The amount deductible is the lesser of the amount of the debt or the original capital cost minus the amounts collected. This means that all such losses are fully deductible to the extent that they exceed the capital gains, if any, realized upon the sale.

It was also reported, in the same issue, that an employee would be subject to tax on an amount of \$225.41 in respect of premiums paid by his employer for group insurance. Simple arithmetic shows that the amount should have been \$255.41.

Current Reading

MAGAZINE ARTICLES

ACCOUNTING

"ACCOUNTING — ITS IMPLICATIONS FOR GOVERNMENTS," by E. Bryan Smith. *The Australian Accountant*, May 1959, pp. 266-276.

This paper reviews in broad outline the managerial planning and control functions, the accounting function, and the related control devices of performance budgeting and cost accounting, with particular emphasis upon functions, delegation of authority and responsibility, and the use of standards. The author draws on industry experience in these areas to point to ways in which accounting practices in government may be improved.

His specific recommendations to improve the planning and control of government activities are as follows:

1. The principle of separation of revenue and loan funds should be discarded and replaced by a classification of receipts and expenditures on a capital and revenue basis.
2. The whole body of central government accounts, including those of public undertakings, should be properly integrated, so as to portray a more realistic picture of the overall activities of the department or government to which the undertaking is related.
3. Classification of items in all government accounts and financial

statements should be made from the standpoints of administrative and legislative control and social accounting.

4. A consistent and logical basis of accounting for depreciation of fixed assets should be adopted.
5. Accrual accounting should be adopted in government business undertakings to focus attention on all resources applied to a project, rather than on those obtained from current cash appropriations.
6. All government undertakings should adopt uniform systems of accounting and reporting. This would facilitate analysis and interpretation, and help in the provision of data for social accounting purposes.
7. Standard costs may be used in public administration as industry uses them in production and distribution.

"A MANAGERIAL APPROACH TO DEPRECIATION AND DEFERRED INCOME TAXES" by Samuel A. Martin. *The Business Quarterly*, Spring 1959, pp. 28-35.

This article considers four alternative methods of treating depreciation and income tax cost, with illustrations related to the reports of four Canadian corporations. While not taking a position in favour of any particular method, Martin suggests five criteria to guide financial management in de-

termining which one to adopt: Should the maximum capital cost allowance be claimed for tax purposes? What is the purpose of depreciation, and, accordingly, how much depreciation should be charged in company records? Is today's income tax cost the amount which is payable currently or does it include an amount which *may* need to be paid at an indeterminate future date? Are replacements and additions to depreciable plant and equipment likely to delay the payment of deferred income taxes indefinitely? How are published earnings-per-share figures used in determining the market price of stock?

Where amounts involved are material, the author suggests that a company state its policy toward the method and amount of depreciation recorded in the books as well as the method and amount claimed for income tax purposes. These amounts should be shown both for the current year and the total accumulated in previous years. The shareholder would then have, he believes, all the information necessary to evaluate the "true" net income of one company in relation to another.

BUDGETING

"THE CAPITAL EXPENDITURE CONTROL PROGRAM — A SUMMARY OF PRACTICE," NAA *Bulletin*, Accounting Practice Report No. 7, March 1949, 31 pages.

Of 80 practice descriptions submitted by companies on the control of capital expenditures, the majority emphasized that the first step in such a program is the capital budget. The budget, in large measure, they report, insures that all objectives of a cap-

ital expenditure program will be realized. Management must usually choose among projects to develop a well-rounded and profitable program. Almost all projects are desirable to a degree and management must appraise the relative advantages of each. The budget is the only opportunity to see projects side by side and so evaluate the contribution of each for future periods. The claims and proposals made by numerous departments and strata of management are formalized in the budget.

The descriptions made frequent reference to two-year budgets, and five year forecasts were quite common. Instances were noted of ten and 20-year surveys.

For the most part, capital expenditure budgeting begins at the lowest levels of responsibility and works through management levels to the president and board of directors. Each level is given an opportunity to appraise the proposals for reasonableness, coordinate the proposals of lower levels and to add the projects that can be decided upon only at that level. As the budget is developed, an initial weeding out of low priority projects is made. Possibilities for equipment transfer are also considered. The consolidated budget, representing the thinking of many levels of management, is then presented to a budget committee or executive management.

The second point of managerial control offered by a comprehensive capital expenditure program is the requirement that a detailed request for appropriation of funds be submitted for each project before it is begun or before binding commitments are made. This requirements is made to apply both to projects previously ap-

proved in the budget and to subsequent project additions or substitutions.

The next step in the control plan consists of the issuance of reports during the period in which the project is being performed. While some companies let one report carry the facts to all levels of management, the general policy seems to be to have a series of two or more reports.

The final step in a comprehensive capital control program is reported to be the post-completion audit. On this aspect of the program, a wide diversity of practices was revealed in the various company descriptions. Making no attempt to develop a composite or general plan for inclusion in its pamphlet, the N.A.A. presents three practices as reported by the companies themselves.

BOOK REVIEWS

"Accounting for Oil and Gas Producers", by C. Aubrey Smith and Horace Brock; Prentice-Hall Inc., Englewood Cliffs, N.J.; 1959; 536 pages; \$8.00.

In his first contact with the financial side of the operations of an oil exploration and producing concern, the newcomer will be impressed by three abnormalities:

1. The length of time required, because of far-flung operations, to complete the records for a given period.
2. That the financial records contain no record of the most desirable asset, reserves of oil and gas.
3. The scarcity of authoritative literature on systems of accounts.

This volume is the product of years of experience of trained teachers in

analyzing and recording the principles which have been developing in the industry. Hence, it is stated simply and has an abundance of examples and charts for effective illustration.

The authors open with several chapters calculated to orient the layman to the general economics of the industry, giving him an understanding of its *modus operandi* and the peculiarities of its language. A typical organization of an exploration and producing department is set out.

Thus equipped, the reader is led through accounting organization into concise, yet thorough, discussions of accounting theories and suggested systems dealing with all phases of the oil exploration accountant's problems.

Property records and control of expenditures are detailed, supported by charts of accounts and sample forms; so are AFE procedures and budgetary controls. Throughout, suggestions are made as to which of many controversial problems of accounting practice might best be followed. These are documented by a survey of the practices of some 60 operating concerns of varied sizes.

S. B. LAING, F.C.A.
Calgary, Alta.

"Industrial Accounting," by S. W. Specthrie; Prentice-Hall Inc., Englewood Cliffs, N.J.; 583 pages; \$10.00.

As the author correctly states in his preface, "This book is intended for business, liberal arts, and engineering students who wish, in a single course, to gain an understanding of the principles, processes, and executive uses of both general and cost accounting. It is a book written for those who want to learn rather than to do accounting."

No previous knowledge of accounting is required in order to understand this book. An intelligent high school student may read it and gain a good basic understanding of accounting principles. The first chapter starts off easily with the definitions of assets, liabilities, capital, etc. The next 12 chapters lead the reader in logical steps through journals, general ledger, trial balance, worksheets, financial statements, bank reconciliations, control accounts, subsidiary ledgers, promissory notes, asset and expense expenditures and depreciation. As he goes along the reader may test his knowledge by answering the questions and working out the problems at the end of each chapter.

Everything is explained in non-technical language, and the style is easy. The book is not intended as a reference for industrial accountants but, like the reviewer, they may find it useful as a means of interesting their staff in the study of accounting.

J. H. GOUGH, C.A.
Montreal, Quebec.

BOOKS RECEIVED

LABOUR

"Labour Unions and the Concept of Public Service" by Roscoe Pound; published by the American Enterprise Association, Washington, D.C.; pp. (viii) and 63.

Labour unions should be subject to duties and responsibilities under law for the performance of public service just as other monopolies enjoying franchises and privileges.

This is the recommendation of Roscoe Pound, former Dean and Professor Emeritus of the Harvard University Law School, in a study of great topical importance.

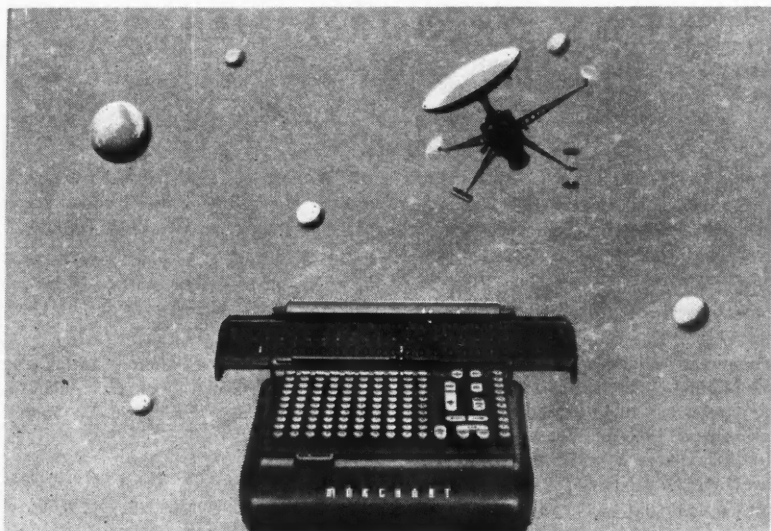
Commenting on the development of the idea of public service, Dean Pound observes:

Control of what is today the indispensable means of performance, namely, employment of the labour by which the performance of the public service must be carried on . . . has come to be and now is substantially in the hands of strong nation-wide organizations which have achieved what now amounts in practice to a monopoly.

He notes that this condition has been aggravated in the United States by recent legislation establishing immunities of labour unions and providing Labor Relations Commissions to give effect to those immunities. As a result, he says, there is *de facto* control by labour unions of the means of performance of public service without a corresponding legal duty.

The author adds: ". . . the trade unions are strictly operated oligarchies. There is centralized power and diffused legal responsibility, amounting in practice to irresponsibility."

Finding four settled principles for legal reasoning in applying the concept of public service to labour unions, Dean Pound points out that the adjustment of the situation in labour today to rational principles does not imply the destruction of unions or the impairment of their efficiency. "Unions are an institution needed in the life of today," he writes. "They are to be preserved and fostered as useful, even if we cannot treat them as peculiar favourites of government at the expense of the general public interest. What is sought is not to destroy or impair them, but to fit them into the legal, social and economic system of the era on which we have definitely entered . . ."



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NEWS OF OUR MEMBERS

Alberta

Geddes, Knebel, Beaton and Mathieson, Chartered Accountants, announce the removal of their offices to 912 Lancaster Bldg., Calgary.

British Columbia

R. W. V. Dickerson, B.Com., C.A. announces the admission to partnership of Earle Phillips, C.A. They will practise their profession under the firm name of Dickerson & Phillips, Chartered Accountants, with offices at 1237 Howe St., Vancouver and 662, No. 3 Rd., Richmond.

W. R. Myhill-Jones, C.A., and W. C. Southworth, C.A., announce the formation of a partnership for the practice of their profession under the firm name of Myhill-Jones, Southworth & Co., with offices at 1664 West Broadway, Vancouver 9.

Manitoba

W. R. Corner, C.A. has been appointed co-ordinator of data processing for Canadian National Railways.

Laird, Sprague & Co., Chartered Accountants, Brandon, announce the admission to partnership of S. A. Dickens, C.A.

Ontario

K. H. Ward, C.A. announces the removal of his office to 7 Riverview Gardens, Toronto 9.

Fisher, Gordon & Co., Chartered Accountants, and Stern, Sanders & Co., Chartered Accountants, announce the amalgamation of their practices which will be carried on under the firm name of Fisher, Sanders, Stern & Nisker, Chartered Accountants, with offices at 67 Richmond St. W., Toronto and at North Bay and Windsor.

J. Patrick Ryan, C.A. has been appointed controller of Iron Fireman Manufacturing Co. of Canada Ltd., Toronto.

R. A. Gourley, C.A. has been appointed branch comptroller of the Toronto Branch of Dominion Bridge Co. Ltd., Toronto.

Gerald Jenkins, C.A. announces the opening of an office for the practice of his profession at Room 52, Fraser Bldg., 53 Queen St., Ottawa.

Hilborn & Co., Chartered Accountants, announce the removal of their office to Royal Bank Bldg., 8 King St. E., Toronto.

Quebec

A. E. Beauvais, C.A., has been appointed vice-president and managing-director of Donohue Brothers Ltd.

Percy Auger, C.A. has been appointed secretary of Donohue Brothers Ltd.

W. J. Lawand, B.Com., C.A., announces the opening of an office for the practice of his profession at Ste. 205, 7200 Hutchison St., Montreal.

Greenfield, Nozetz & Co., Chartered Accountants, wish to announce the removal of their offices to 4824 Cotes Des Neiges Rd., Suite 42, Montreal.

OBITUARIES

We regret to announce the death of the following members:

ALEXANDER GOLLAN CALDER — On July 16, 1959 in London, aged 86. He was admitted to the Ontario Institute in 1906 and was in the wholesale fur business for some years. In World War I he was overseas as a major in the 142nd Battalion. After the war, Mr. Calder spent several years with the Income Tax Department before commencing his own practice. He was made a Fellow in 1929 and was president of the Ontario Institute in 1935-36. Mr. Calder had been an alderman of the City of London.

Continued on page 366



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ETHELBERT JAMES BENNETT — On August 25, 1959, in Toronto, aged 80. Mr. Bennett became a member of the Institute of Chartered Accountants in England and Wales in 1907, the Quebec Institute in 1913 and the Ontario Institute in 1914. He was made a Fellow of the last Institute in 1924. For many years he was senior partner of George A. Touche & Co., in Toronto. Active in civic affairs, he was honorary life president of the Canadian Corps of Commissioners (Eastern Can-

ada) and honorary life member of the Toronto and North York Hunt and Eglinton Hunt clubs.

BRIAN MARTIN ABBOTT — In Calgary on August 25, 1959, at the age of 42. Mr. Abbott enlisted in the R.C.A.F. in 1942. He was admitted to the Saskatchewan Institute in 1952 and to the Alberta Institute in 1957. From 1949 to 1956 he was senior accountant with Sohio Petroleum Co., and in 1956 joined Rio Palmer Oils Ltd. as secretary-treasurer.



INSTITUTE NOTES

ONTARIO INSTITUTE

"Canada's Major Industries": The University of Toronto Extension Department is presenting a course on ten of Canada's most significant industries, discussing their relative importance in the economy, growth possibilities, and the factors likely to influence their operations. Guest speakers at the lectures will be top executives from major companies in the industries. The course fee is \$15 and applications may be obtained from the University Extension Department, 67 St. George St., Toronto. The lectures will be on Monday nights commencing October 5, 1959.

QUEBEC INSTITUTE

Lecture Series: The first in a series of annual lectures to be known as "The Anniversary Lectures of the Institute of Chartered Accountants of Quebec", commemorating the founding of the Institute in 1880, will be delivered at a dinner meeting of members and their guests in the Queen Elizabeth Hotel, Montreal, on Tuesday, November 3. Guest speaker will be Donald Gordon, C.M.G., LL.D., D.C.L., chairman and president, Canadian National Railways. He will speak on changing money values and responsibility of accountants.

Forum Program: Four forums, two in English and two in French, are included in the fall program of the Institute at its assembly hall. The first French forum, held on September 29, dealt with "The Federal Sales

Tax and the Auditor's Responsibility in Relation Thereto", with Charles McLaughlin, C.A., tax manager, Canadian Industries Limited, and Louis-Philippe Rondeau, C.A., of Raymond, Chabot, Martin, Paré & Cie. as panelists. The second French meeting is scheduled for November 26.

The English forums start on October 6 with William M. Mercer, chairman, William M. Mercer Limited, and R. S. Whyte, supervisor of pension trusts, Royal Trust Co., speaking on "How to Get the Most out of Your Pension Dollar". The second English forum is scheduled for November 24.

Chairmen of the Forum Sub-Committee are W. R. Clerihue and R. J. F. Morcel.

VANCOUVER C.A. CLUB

Hon. Lester Pearson was guest speaker at the inaugural meeting of the 1959-60 season on September 17 at the Hotel Georgia. The newly elected executive of the club are Roy Bell, president; Alex Reid, past president; Bob Young, vice-president; Colin Pew, treasurer; R. B. MacKinnon, secretary; Phil Barter, attendance committee; Ian Adam, ticket committee.

SAULT STE. MARIE STUDENTS

The C.A. students of Sault Ste. Marie elected the following executive at a meeting on August 26: Gerald Collins, president; Laurie Smith, vice-president; Donald MacDonald, secretary-treasurer.

Loans **for capital expansion**

Many industrial enterprises with good prospects but in need of finances will be started or expanded this year in a way that provides a sound basis for development through the financial assistance of the Industrial Development Bank.

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Winnipeg	195 Portage Ave. East
Toronto	250 University Ave.
London	291 Dundas St.
Montreal	901 Victoria Square
Quebec	955 Chemin St. Louis
Saint John	35 Charlotte St.
Halifax	65 Spring Garden Road

SWEETNESS AND LIGHT

THINKING MAN'S PROBLEM

It is generally taken for granted that civilization has improved and refined the mental powers of the human race. Through education we are all capable of reading vast quantities of material on almost any subject, and when we turn on the TV we feel well-equipped to follow a conversation with Adlai Stevenson or pit our wits against Bennett Cerf.

One human faculty which has deteriorated badly since ancient times, however, is the memory. For centuries before the first word was written, people relied on their memories to tell them their law, religious doctrine, history and business transactions. Even when some documents were committed to writing, men still carried around a deal of knowledge in their heads. Many of the books of the Old Testament were transmitted orally from father to son for generations. In 700 B.C. the bards who recited the 24 books of Homer's *Iliad* at royal Grecian banquets often found their listeners joining in. In the Middle Ages, Chaucer claimed that his lawyer-pilgrim in *The Canterbury Tales* could rhyme off by heart every statute on the books, and some of them were only slightly less complicated than the section on business expenses in the Canadian Income Tax Act.

Today most of us cannot retain a name and telephone number for the length of time it takes to complete the dialling, unless we have it written in front of us. A shopping expedition for more than two items definitely calls for a list, and if it is the Christmas shopping list, we must also note the names of the people, or we will surely forget what relatives and friends we have.

Perhaps we are all victims of a surfeit of paper lying around on desks and tables, or in pockets and purses. Some of it is cov-

ered with words, some indecently blank and some, the most insidious of all, contains a few words with ruled lines for completion. We travel the daily round from report to practice manual to memorandum to statement of account and back again without ever once being thrown on our own resources to retain the data they impart. Our follow-up calendar pads even go so far as to insert a special slip during October reminding us to go out and buy next year's calendar pad in case we had forgotten that the present year is on its last legs.

Some ingenious people, spurning paper assistance, rely on memory crutches, like putting an elastic on a car handle whenever they have to pick up clothing at the cleaner's. One accountant used to put a second green pencil in his coat pocket if his wife phoned him to buy a quart of milk at the store on his way home from work. The girls in the office caught on to this and one day slipped an extra pencil into his pocket after lunch. He could not remember whether his wife had phoned or not, so playing it safe, stopped at the supermarket and made his purchase. He carried it into his house concealed under his coat, only to find the refrigerator full of milk. Perhaps a braver man would have nonchalantly put the milk on the kitchen table and dared a comment. Suffice it to say that late that night after all the others in the house had gone to bed, this one took his pussy-cat down cellar, and the two of them went on a silent milk binge.

Yet there is every reason to classify him as a Thinking Man, like so many others. And like so many others, he will tell you that the Thinking Man's real problem isn't knowing the correct brand name of cigarettes, but trying to remember to pick up a package at the corner when he is down to his last smoke.

— J.V.

CLASSIFIED ADVERTISEMENTS

All replies to box numbers should be sent to
The Canadian Chartered Accountant, 69
Bloor Street East, Toronto 5, Ontario

Closing date is 13th of preceding month

THE UNITED NATIONS RELIEF and Works Agency for Palestine Refugees is seeking qualified men for responsible positions as internal auditors. Personnel to fill these posts are normally recruited at an initial base salary of U.S. \$5,000 plus \$200 allowance per annum per dependent, plus a monthly mission allowance in local currency totalling approximately U.S. \$2,136 per annum for a married man and \$1,416 per annum for a single man. In the first six months an allowance of U.S. \$8.00 per day for a married man and U.S. \$5.00 per day for a single man is paid in substitution for the monthly mission allowances. An adequate allowance is also paid during travel on duty. These salaries and allowances are paid free of income tax. Auditors normally spend more than half their time in the field missions, in broken periods of usually not more than two weeks. The Agency's headquarters is in Beirut and its field missions are established in the Lebanon, Syria, Jordan, Gaza and Egypt. Please submit adequate details of qualifications and experience and age and number of dependents in the initial application, together with a photograph, to Chief, Personnel Division, UNRWA, Maison UNESCO, Beirut, Lebanon.

CHARTERED ACCOUNTANT: Required by Toronto group of mining exploration companies engaged in Canadian and foreign exploration. Would act as chief accountant and financial analyst for group. Salary commensurate with experience. Write giving full details to Box 935.

A PROGRESSIVE FIRM of Chartered Accountants requires the services of recent graduate. Reply giving particulars of experience qualifications and references. Box 939.

INTERMEDIATE STUDENT: Small, progressive firm in Galt offers opportunity to intermediate student for experience in diversified assignments with emphasis on statement preparation and taxation. Modern, air-conditioned office, salary to be discussed. Reply in complete confidence to Clifford Luce, P.O. Box 14, Galt.

PRICE WATERHOUSE & CO. require several chartered accountants for their Montreal and Toronto offices. These positions offer excellent opportunities to competent, energetic men. Applications, which will be treated in professional confidence, should contain full details of education, experience, age and other pertinent information and be addressed to Canada Cement Bldg., Phillips Sq., Montreal, or 55 Yonge St., Toronto.

CHARTERED ACCOUNTANT with small progressive practice in Toronto wishes to discuss possibilities of merging with sole practitioner in similar position. Box 936.

CHARTERED ACCOUNTANT (27) seeks position leading to partnership with practising firm in Toronto. Box 940.

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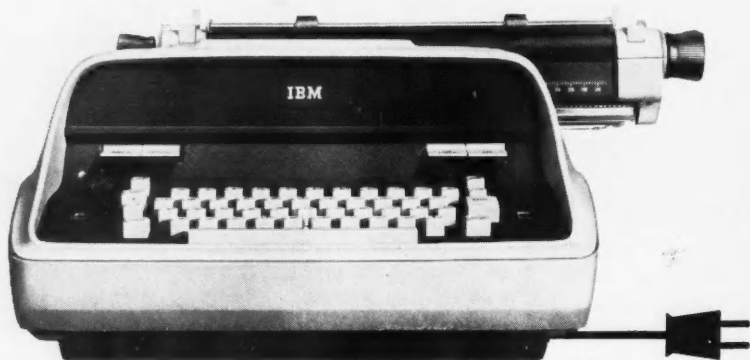
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